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SUBDURAL HEMATOMA IN INFANTS

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AND
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In the past three years there have been admitted to the University Hospital nine infants with subdural hematoma. Since these cases are usually diagnosed as idiopathic hydrocephalus, we are reporting this series to stress the ease of differential diagnosis. The importance of making this distinction lies in the fact that idiopathic hydrocephalus is hopeless, while subdural hematoma is amenable to surgical treatment. There is no doubt that we, as well as others, must have frequently overlooked the condition.

SYMPTOMATOLOGY

The symptom first noted is a gradual enlargement of the head, usually associated with convulsions. This is seldom observed before the age of 4 months. Though the shape of the head resembles that of hydrocephalus, the expression of the face is different. This, we feel, is a most important point. Instead of a dull, apathetic face, one sees a bright, alert expression, even though the eyeballs are displaced downward. In the far advanced cases this may not be true.

On percussion over the parietal region a dull note is obtained, while in hydrocephalus the note is tympanitic (McEwen's sign). A high-pitched note over a subdural hematoma in adults has been described by Rand.[1] The note in infants is, however, entirely different. On examination of the fundus, retinal hemorrhages and various degrees of optic atrophy may be seen and, occasionally, choked disk.

The diagnosis is established on puncture of the fontanel. If true hydrocephalus exists, the ventricle is usually entered at a depth of from 1 to 2 cm., colorless ventricular fluid being readily obtained. In subdural hematoma the fluid appears just after the click of piercing the membranous fontanel. It varies from slightly straw-colored to almost pure blood and gushes from the needle with each cry. One should not be confused here by subarachnoid fluid which might be increased by cortical atrophy and slightly colored by the trauma of the puncture. Immediate centrifugation will show in the latter condition a clear colorless supernatant fluid.

After reporting our cases, we will discuss the etiology, pathologic physiology and treatment.

From the Department of Surgery, University of Michigan Medical School.

1. Rand, C. W.: Chronic Subdural Hematoma, Arch. Surg. 14: 1136 (June) 1927.

REPORT OF CASES

CASE 1.—B. C., an illegitimate boy, was born at the Maternity Clinic of the University Hospital, Dec. 12, 1927. The delivery was normal and at term. He was placed on a formula ten days later. He was referred, April 17, 1928, because of a gradual enlargement of the head. There were no other symptoms except occasional vomiting.

Examination revealed a large, typically hydrocephalic head with a bulging fontanel. The eyes were displaced downward. The fundi showed both disks to be edematous. There were two large hemorrhages in the right fundus near the disk.

A ventricular puncture was attempted on the left without success. When the needle was removed, blood-tinged xanthochromatic fluid trickled from the puncture wound. A similar result ensued when the right side was tapped, except that the fluid was bloodier. Fluid was then aspirated from both sides and air injected. Roentgen examination revealed this to be extra-arachnoid. When both fluids were centrifugated, that on one side was seen to be deep yellow while the other was smoky reddish.

One of us (M. M. P.) made a right sided subtemporal decompression of about 30 mm. The dura was under marked tension and abnormally red. It was incised, and immediately xanthochromatic fluid spurted upward to a height of about 6 inches. When the pressure of the fluid had been exhausted the dura was widely opened. The brain, covered with arachnoid, immediately herniated slightly into the dural opening. There was considerable fluid beneath the arachnoid. This was aspirated with a fine needle and found to be perfectly clear. The brain was then depressed and a large amount of xanthochromatic fluid escaped from the anterior region. Herniation of the brain immediately ceased; in fact, it was sunken about 1 cm. below the temporal opening. No clots were seen, although the lateral aspect of the cerebral hemisphere was carefully explored throughout. The dura appeared pinkish. A piece was removed for pathologic examination. The wound was closed in layers.

Dr. Warthin's diagnosis was chronic pachymeningitis hemorrhagica.

A similar operation was performed on the other side a few days later with an entirely similar result.

The general condition was good postoperatively, but both wounds soon bulged with fluid subcutaneously. This was necessarily aspirated almost daily and was always xanthochromatic. Soon the downward gaze of the eyes disappeared. Six weeks later the shape of the head appeared almost normal. The accumulation of fluid, however, continued for about six weeks more. The patient was discharged apparently normal in appearance and mentality, July 11, 1929.

In considering this case in the light of our present knowledge, we realize that this was a mild degree of the condition we are discussing. There was undoubtedly an inner membrane lying over the arachnoid but it was so thin and transparent that it was not recognized. This inner membrane is ordinarily very firm and opaque, being usually strong enough to prevent the brain from expanding.

This case is undoubtedly the type that might regress spontaneously or after repeated punctures of the fon-

tanels. A report in October, 1931, showed that the head was apparently normal in size and that there was no bulging of the decompressions. The intelligence quotient was 68 by the Binet test.

CASE 2.—D. H., an illegitimate boy, born at the Maternity Clinic, July 2, 1927, and placed on a formula almost immediately, was discharged to a nursing home as normal.

Fig. 1 (case 4).—Large head and normal facial expression. The fontanel is sunken from previous subdural puncture.

He was returned to the hospital three months later because he was not moving the left arm as formerly and was very apathetic. Examination by the department of pediatrics was negative: the anterior fontanel did not bulge and the head was apparently normal. The spinal fluid was negative.

He was admitted one month later because of a single convulsion and continued listlessness. He was a well nourished infant at this time. The head was enlarged and the anterior fontanel was bulging. There was a staring expression to the eyes. The Kahn test of the blood was negative. The fundi showed neuroretinitis with edema of the nerve heads.

Puncture of the fontanels revealed subdural bloody fluid on both sides, that on the right being darker. Air was injected on the right after the removal of about 40 cc. of fluid. Roentgenograms revealed the air-containing space to be limited posteriorly by the tentorium cerebelli, medially by the falx cerebri. It extended laterally over the parietal lobe. The normal convolutions of the brain which are ordinarily delineated when air is in the subarachnoid space were not seen.

A right sided osteoplastic flap was turned (E. A. K.), exposing the dura, which was under marked tension. The dark blue coloration indicated hemorrhage beneath. The dura was opened, exposing a gelatinous appearing cyst wall covering the entire brain. The cyst was opened, considerable hemorrhagic fluid escaping. The tough false membrane over the arachnoid was removed as far as possible, as well as the gelatinous lamination adherent to the dura. The condition became poor and the child died during the closure.

CASE 3.—R. H., a boy, aged 6 months, admitted to the hospital, Oct. 10, 1928, had a normal labor. Cyanosis or convulsions were not present. The child had always been on a formula.

He was apparently well until about two weeks previous to admission when vomiting of a projectile type began. Convulsions had occurred twice in which the hands shook and the eyes rolled. The child was comatose for some time following each attack. The enlargement of the head was first noted at the onset of the vomiting and had progressed rapidly up to the time of entrance.

On examination the child appeared acutely ill. There was great enlargement of the frontal bossae. The anterior and posterior fontanels were widely open and there was considerable separation of the sutures. The veins of the scalp were dilated. The eyes were turned downward and in. The fundi showed bilateral choked disks. The blood Wassermann was ++++.

On puncture of the fontanels about 300 cc. of slightly bloody, orange-colored fluid was obtained from the two sides.

Antisyphilitic treatment was commenced. The subdural spaces were frequently tapped but there was no improvement after three months.

Jan. 16, 1929, under nitrous oxide anesthesia, a large, right sided osteoplastic flap was turned downward (M. M. P.). When the dura was opened there was an escape of a large amount of xanthochromatic fluid. Covering the inner surface of the dura was a definite membrane, which was quite adherent but could be peeled from the dura. The inner surface of this membrane was pinkish and shiny. The brain was displaced downward 3 or 4 cm. in the frontal region and less toward the parietal, so that the posterior parietal membrane, brain and dura were adherent. The displaced brain was covered with a semiopaque, pearly glistening membrane, which readily peeled from the arachnoid. A large portion of the dural membrane was removed, as was that over the displaced brain. The dura was partially closed and the osteoplastic flap returned to position. The incision was closed in layers.

About one hour later the patient suddenly became cyanosed, and respirations ceased shortly.

At autopsy, besides the subdural hematoma on the left side, there was well marked dilatation of all ventricles.

CASE 4.—R. M., a boy, aged 10 months (fig. 1), a second baby, by a normal delivery, was placed on a formula at 2 weeks. Enlargement of the head was first noted at 4 months. It had gradually increased 1 inch. Convulsions of both a clonic and a tonic nature had occurred two or three times a month since the enlargement was first noted. Projectile vomiting was associated with these attacks.

Fig. 2 (case 5).—Hydrocephalic type of head with a circumference greater than the chest. Bilateral fontanel punctures into subdural hematomas are sealed with collodium-cotton dressing.

The child had an abnormally large head and was unable to hold it up for any appreciable length of time. The expression of the face was that of a bright active child, and he smiled and laughed frequently. The anterior fontanel was large and bulging. The fundi showed no evidence of an increase in intracranial pressure.

On puncture of the fontanel the ventricles were not encountered. On the left, a large amount of bloody fluid was obtained from the subdural space. The fluid on puncture of the right fontanel was straw colored.

A right sided osteoplastic flap was turned (E. A. K.). The middle meningeal vessels were seen to be three times their normal size. When the dura was opened, it was easily separated from a cystic purplish gelatinous mass. Over 50 cc. of bloody

Fig. 3 (case 5).—Appearance of patient two years after operation.

fluid escaped when the mass was incised. A thin, tough, milky membrane covered the arachnoid and was stripped from it as far as possible.

Postoperatively the child seemed to be in excellent condition. Several hours later respirations suddenly became very shallow and the child soon died. A cause for the sudden death was not found at autopsy.

CASE 5 (fig. 2).—F. K., an illegitimate boy of a normal delivery, was born, Sept. 10, 1928, at the Maternity Clinic. The Kahn test was negative. The child was soon placed on a formula. He gained weight rapidly and was taken to a boarding home in November. At that time the head seemed larger than normal. About Christmas time a generalized convulsion occurred, and there was one following this.

The baby was returned for examination because of a continuous enlargement of the head, which presented a typically hydrocephalic appearance. There was some bulging of the anterior fontanel, and on percussion over the parietal bone a flat note was obtained. The appearance of the face showed no evidence of mental dulness. There was a peculiar bluish discoloration about the eyes. There was questionable early optic atrophy, with one hemorrhage in the left fundus. A diagnosis of pachymeningitis hemorrhagica was made.

Puncture of the fontanel on the left side revealed considerable clear yellow fluid. The fluid was very bloody on the right.

A few days later a bronchitis developed. Following this, a definite left sided bronchopneumonia was revealed by roentgen examination.

April 17, 1929, a small right sided osteoplastic flap was turned (E. A. K.). The dura was seen to be blackened and under considerable tension. A needle was inserted beneath the dura, and considerable bloody fluid was obtained, relaxing the dura. The middle meningeal vessels were ligated. The dura was opened with the base below. It stripped readily from a glistening, black, gelatinous membrane. This was opened, giving entrance into a cavity containing bloody fluid. The patient went into shock at this point, but on lowering of the head the condition improved.

The undersurface of the cavity was lined with a milky white membrane which covered a normal arachnoid. All the membrane was removed except for some far anteriorly. It did not extend posteriorly beyond the midparietal region.

The dura was closed with interrupted silk sutures and the wound was hastily brought together in two layers. The baby at this stage was in profound shock but rallied after a hurried whole blood transfusion.

The third day after operation, 100 cc. of bloody fluid was aspirated subcutaneously. Several more aspirations were necessary in the next ten days, following which there was no further accumulation.

June 9, a left sided osteoplastic flap was turned and a similar pathologic condition was found except that the fluid was somewhat less bloody. An attempt was not made to remove as much of the membrane as previously. Transfusion was performed at operation.

Postoperatively it was necessary to aspirate twice in about five days, but following this there was no further accumulation of fluid.

The patient was returned (fig. 3) for examination, November 1. He was walking and the nurse stated that he was "brighter than normal." He was again seen in June, 1931, at which time he was perfectly normal to all appearances.

CASE 6 (fig. 4).—R. C., a Negro boy, aged 13 months, who was delivered with instruments was in good health and was breast fed for ten months. His mother was a primipara with a history of a positive Wassermann reaction. He sat erect at 9 months. The past two months it was noted that the child was very irritable, that his appetite was poor and that he vomited frequently. The mother stated that the head had always been large.

Examination revealed a large globular head. The anterior fontanel was bulging. The facial expression was that of a

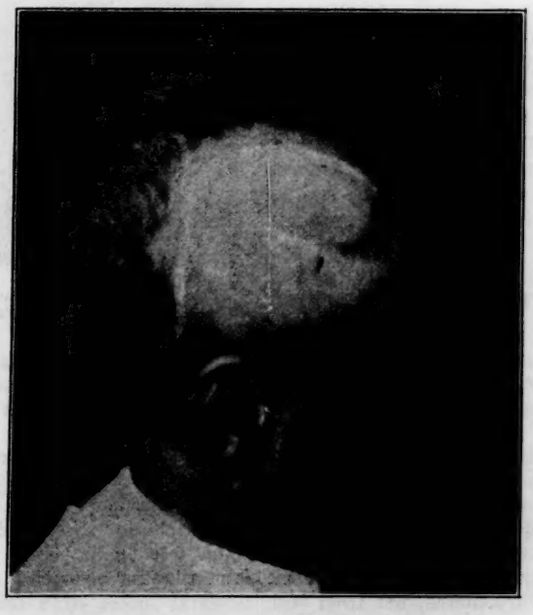

Fig. 4 (case 6).—Appearance two weeks after operation.

normally bright child. The fundi showed early consecutive optic atrophy and no hemorrhages. There was dulness on percussion over both parietal regions. The Kahn test of the blood was negative and there were no signs of hereditary syphilis.

Subdural puncture of the right fontanel revealed about 40 cc. of very bloody fluid. On the left only a small amount of clear subarachnoid fluid was obtained. A diagnosis of right sided pachymeningitis hemorrhagica was made.

March 18, 1930, puncture of the left fontanel gave only a small amount of clear subarachnoid fluid. On right sided puncture about 30 cc. of very bloody fluid was obtained. A small right sided osteoplastic flap was then turned (E. A. K.). The dura was lax and when it was opened about 40 cc. of fluid escaped. The middle meningeal vessels were only slightly larger than normal and were secured with clips. The membrane on the dura was only about 2 mm. thick. It was stripped from the dural flap. No attempt was made to strip more of it from the surrounding dura. Though the arachnoid appeared normal, a thin greenish yellow membrane entirely covered it. This membrane was very delicate and was easily removed. The wound was closed in layers. The child was never in a serious condition during or after operation.

March 26, the bone flap was elevated by underlying fluid. About 80 cc. of bloody fluid was aspirated; March 30, 90 cc. was aspirated. It was necessary to aspirate the fluid every few days for a month. The fluid was then allowed to accumulate, raising the flap slightly. This disappeared spontaneously in about two weeks.

July 7, there seemed to be some fluid beneath the flap. On aspiration, 40 cc. of clear colorless cerebrospinal fluid was obtained. This was repeated a few days later. There was no further elevation of the flap and the child was discharged in good condition. The child was seen again in January, 1931. He was apparently perfectly normal. The mother had not noticed any increasing enlargement of the head. In October, 1931, the child was bright and symptom-free. Measurement showed no increase in the size of the head from the previous January (fig. 5).

Fig. 5 (case 6).—Appearance a year and a half after operation.

We feel that, following operation and aspiration, the internal pachymeningitis had completely resolved or had organized in such a way that transudation no longer occurred. This meant the formation in so large a head of considerable dead space, which naturally became filled with cerebrospinal fluid. This accounts for the aspiration of clear fluid so long after operation.

CASE 7.—D. D., aged 10 months, a seven-months premature infant, had had a normal birth. It was the mother's seventh pregnancy. At the age of 4 months it was noted that the child was losing weight. There was a loss of appetite and diarrhea. At the time of entrance, the child had never sat alone. There was no history of convulsions.

The appearance was that of a greatly emaciated infant with a head suggesting hydrocephalus. The fundi showed slight secondary optic atrophy. The Kahn test of the blood was negative. On puncture of the fontanels the ventricles were not encountered, but from both subdural spaces straw-colored fluid was obtained.

Two months following admission, a right sided osteoplastic flap was turned (E. A. K.). A comparatively thin membrane was found beneath the dura. This was partly excised and the membrane covering the arachnoid was almost completely excised. There was an accumulation of about 60 cc. between the two membranes. About two hours after the operation, respirations suddenly ceased, the pulse continuing, however, for several minutes.

CASE 8.—B. B., a boy, aged 6 months, was admitted because of increasing enlargement of the head, noted the past two months. There was no history of convulsions. He had been discharged from our maternity home at the age of 6 weeks in good condition. The mother was a primipara; the child, illegitimate.

The infant was well nourished. The head was typically hydrocephalic, the fontanel was large but not bulging. The coronal suture was open. There was dulness on percussion over both parietal regions. The fundi showed only slight pallor. On puncture of the fontanels, xanthochromatic fluid was found in both subdural spaces.

A right sided osteoplastic flap was turned (M. M. P.). Immediately beneath and adherent to the dura was found a dense false membrane, beneath which was a large organized clot. A firm membrane covered the arachnoid. Between this and the clot was from 200 to 300 cc. of yellowish, slightly bloody fluid. When the clot was removed, the brain did not expand. It did so only after the removal of the membrane covering the arachnoid. Beneath the arachnoid, clear fluid could be seen. The child left the operating room in fair condition. He continued to improve, when respirations suddenly ceased. The pulse could be felt for several minutes afterward.

CASE 9.—B. L., an illegitimate child, had had a breech presentation. The Wassermann reaction of the cord blood was negative. He was immediately placed on a formula.

He was brought to the University Hospital because of a progressive enlargement of the head. The head presented the typical appearance of hydrocephalus with bulging fontanel, separated sutures and prominent scalp veins. There was dulness on percussion over both parietal regions. The fundi showed diffuse choroiditis and secondary optic atrophy.

Puncture of the fontanels revealed amber colored fluid on both sides. A diagnosis of bilateral subdural hematoma was made.

Under local anesthesia a large left sided osteoplastic flap was turned (M. M. P.). The dura was incised, making a flap with the base posterior. A thin subdural membrane covered the entire dura and was stripped off well to the frontal and occipital regions and from nearly the midline above downward into the floor of the middle fossa. There was a large amount of bloody fluid covering the cerebral cortex. When this was evacuated it was seen that the combined pressure on the brain coupled with the distention of the skull had pushed the dura so far away from the brain that there was a space of at least 1 inch between the inferior longitudinal sinus and the surface of the cortex. The cortical veins passing to the superior longitudinal sinus had been stretched until they were from 1 inch to 1½ inches long. A thin yellowish membrane, rather opaque and very tough, enclosed the cerebral cortex. This was stripped away, allowing the brain to expand. All the blood on the right side was thoroughly irrigated away, the dura closed and the osteoplastic flap returned to position. The scalp incision was closed in layers.

The postoperative condition was fair. Transfusion of 100 cc. of whole blood was done. Ten days later a right sided osteoplastic flap was turned under local anesthesia (M. M. P.). A similar condition was encountered. The two hematomas communicated beneath the falx. This was the only case in which this was found. Postoperative aspiration was performed six days later and was repeated every few days for one month, when the fluid had practically disappeared and no further aspiration was necessary.

ETIOLOGY

Trauma is undoubtedly the most important factor, as stressed by Trotter.[2] Malnutrition, however, may predispose to this condition. None of our patients were breast-fed for any length of time except patient 5. Five of our patients were illegitimate, having been cared for in institutions. Sherwood[3] has noted the etiology of this malnutritional factor. Five of his nine patients had been cared for by foster mothers or by charitable institutions. O. Rosenberg,[4] who has had a most exten-

2. Trotter, W.: Brit. J. Surg. **2**: 271, 1914.
3. Sherwood, David: Chronic Subdural Hematoma in Infants, Am. J. Dis. Child. **39**: 981 (May) 1930.
4. Rosenberg, O.: Ergebn. d. inn. Med. v. Kinderh. **20**: 579, 1921.

sive experience with this condition, stated that he had never seen it develop in a healthy, normally developed, breast-fed child.

PATHOLOGIC PHYSIOLOGY

It would seem that there is a definite sequence of events. There first occurs a hemorrhage into the subdural space. This is undoubtedly from the superior

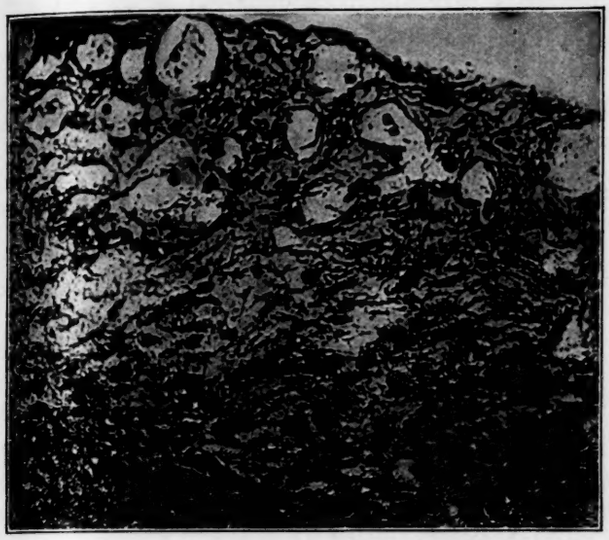

Fig. 6.—Inner surface of organized membrane attached to dura with the thin walled vessels through which transudate passes into cyst.

cerebral veins which run from the cortex to the dura or longitudinal sinus. They have a comparatively short, vertical course in the subdural space, as shown by Trotter.[2] In one adult, we found the vein which apparently had caused the original hemorrhage.

The line of force of the blow is probably in an anterior-posterior or posterior-anterior direction since the broad falx protects this region from lateral trauma.

Following the original hemorrhage there is organization along the inner dural surface with the formation of very thin walled vessels (fig. 6). From these thin walled vessels there is a continuous transudation producing the xanthochromatic fluid. Perhaps the increased intracranial pressure compresses the meningeal veins augmenting the transudation through passive congestion. From time to time a thin walled vessel may rupture. This accounts for the lamination of the membrane. The color of the fluid, which often varies on different punctures on the same side, is also determined in this way.

The membrane on the dura is chiefly supplied by the middle meningeal vessels. These increase greatly in size and are usually seen at operation to have two or three times the normal diameter. The great vascularity of a normal dura is seen in figure 6.

TREATMENT

The outer membrane may be so thin as to be scarcely visible on the inner surface of the dura even though a great amount of fluid is present (case 1). We feel that this is the only type of case that might recover spontaneously or after repeated punctures of the fontanels. Rosenberg [4] states that 50 per cent of these infants die in the hospital, usually, however, of intercurrent infection. He traced fifteen out of thirty who left the hospital. Four died; of the eleven remaining, there were two idiots, three imbeciles, one severe neuropath, one stutterer, two bed wetters, one of whom had optic atrophy, and two were normal. Bronson Crothers [5] feels very pessimistic about complete spontaneous cures. Though our operative mortality is strikingly high, we feel that the poor progress reported by the most experienced observers justifies our position.

That recovery could take place without surgical intervention in such a condition as that presented by patient 5 seems out of the question. The inner membrane, which may be almost as tough as the dura, constricts the brain so tightly that expansion is impossible. After the membrane has been removed, the brain is seen to expand, provided the patient is not in deep shock.

Whether a subdural hematoma could regress spontaneously might be determined by examination of the membranes through a trephine opening. If seen to be very thin, conservative treatment might be tried. The thickness of the membrane does not determine the amount of fluid present or its rapidity of formation.

Our operative procedure is now as follows: If the case is bilateral, the subdural space opposite the side to be operated on is first tapped. This is to avoid subsequent pushing over of the brain with pressure on the brain stem by the fluid on the unoperated side after operation, when the intracranial pressure commences to reach the normal. We feel that three of our patients died as a result of this mechanism, for respiration ceased suddenly while the pulse continued for a short period. One should not wait until the operation has been completed before tapping the unoperated side, since the pressure then may be so low that very little fluid would be obtained.

A moderate sized osteoplastic flap is then turned down over the frontoparietal region. The dura is opened, leaving the base toward the occipital region. The middle meningeal vessels are clipped. The blue black gelatinous membrane is removed without an attempt being made to go too far beneath the dural incision. Following this, the depressed brain covered by a tough transparent or milky white membrane is seen. This is removed from the arachnoid as widely

Fig. 7.—Normal dura, after R. A. Pfeifer.

as possible, there being but slight danger from hemorrhage in this procedure. The dura is then closed and the bone flap replaced without making a decompressive opening. The scalp is sutured in two layers with silk. Facilities for immediate transfusion should be available.

CONCLUSION

Subdural hematoma in infants is not a rare condition. In cases of apparent hydrocephalus, especially

5. Crothers, Bronson: Personal communication to the authors.

those presenting a normal facial expression and a dull percussion note over the parietal area, a subdural hematoma should be suspected and the fontanel punctured. Operation is justified in spite of the high mortality.

SPONTANEOUS SUBARACHNOID HEMORRHAGE

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It is our belief that spontaneous subarachnoid hemorrhage occurs more frequently than is generally appreciated. This belief, together with the fact that the clinical picture is so striking and so easily recognized, prompts us to discuss briefly the subject, and to report concerning twenty-four cases entering the medical services of the Boston City Hospital in the eighteen months between July, 1929, and January, 1931.

INCIDENCE

As an illustration of the frequency of subarachnoid hemorrhage, we have compared the incidence of this condition with that of cerebrovascular accidents of all types and subacute bacterial endocarditis during the same time period. The data are as follows: cerebrovascular accidents (all types), 353 cases; spontaneous subarachnoid hemorrhage, 24 cases; subacute bacterial endocarditis, 22 cases.

Thus, the incidence of subarachnoid hemorrhage is approximately one-fifteenth that of cerebrovascular accidents (including hemorrhages, thromboses) and about equal to that of subacute bacterial endocarditis, a much better known condition than subarachnoid hemorrhage.

HISTORY

Subarachnoid hemorrhage was seldom recognized clinically before 1904. Most of the earlier cases were recognized only after a postmortem examination. Wilks [1] in 1859 described four cases of spontaneous subarachnoid hemorrhage, and Gintrac [2] in 1869 found only thirty-four cases recorded in the literature. It was after the introduction of lumbar puncture by Quincke [3] in 1891 that the clinical diagnosis of the condition could be made easily, especially from observations on the spinal fluid. Froin [4] in 1904 published a complete description of the fluid, its uniformly bloody character, the xanthochromia of the supernatant fluid, and the increase in depth of pigment on succeeding taps as the escaped blood became older.

Ehrenberg [5] in 1912 reported cases and described the condition in detail. Fearnsides [6] added forty-four cases and believed the hemorrhage due to aneurysms in younger people and to arterial degeneration in older people. The aneurysms in younger people he believed were the result of congenital defects of the media of the blood vessels; in fact, he emphasized the rarity of syphilis as a cause of intracranial aneurysm, since in the smaller arteries it causes an obliterative endarteritis rather than a weakening of the media.

McIver and Wilson [7] believed that acute infection produced meningeal hemorrhages by occlusion of many small vessels with infectious emboli and, in this way, weakening of the wall of the blood vessel. Mycotic aneurysms have also been described by Stengel and Wolferth.[8]

ANATOMIC DESCRIPTION

The brain stem has three coverings or meninges. From without, inward, these are (1) the dura, (2) the arachnoid and (3) the pia, which is very vascular. Between the arachnoid and the pia is the cerebrospinal fluid. There are many trabeculae in this space.

Symonds [9] has pointed out that blood in the subarachnoid space may arise from one of the following four sources:

1. A subdural hemorrhage from lacerations of one of the large dural veins with rupture into the subarachnoid space.
2. A hemorrhage in a superficial part of the brain with rupture through the pia and into the subarachnoid space, cerebromeningeal hemorrhage.
3. A deep cortical hemorrhage with rupture into a ventricle and extension through the foramina of Luschka and Magendie into the subarachnoid space.
4. A rupture of one of the vessels lying in the subarachnoid space.

The first group is usually a result of traumatic laceration of the veins leading from the cerebral cortex to the great sinuses. Group 4 is the primary subarachnoid group. However, cases in groups 2 and 3 may present the typical picture of spontaneous subarachnoid hemorrhage with few or no signs of gross cerebral involvement. This is especially true of the patients entering in coma.

Symonds [9] emphasized the importance of the site of the hemorrhage in determining the rate of diffusion of the blood. If the hemorrhage occurs in the basal or pontile cistern, free diffusion is quickly accomplished. On the other hand, if it is in the ventricles, diffusion must occur through the narrow aqueduct of Sylvius, and there is a greater tendency toward localization. A superficial cerebral hemorrhage extending into the subarachnoid space is limited by the walls of the gyrus and the blood tends to gravitate to the base of the brain, and here also the rate of diffusion is slow.

SYMPTOMS AND SIGNS

There is no condition in medicine that is more dramatic, more sudden, than subarachnoid hemorrhage. The patient is usually perfectly well until the sudden onset of headache. This strikes so suddenly and so intensely that some patients have described it as though "struck at the base of the skull" (Symonds). Vomiting, dizziness and coma may supervene in short order.

We have arranged the complete observations of our cases in table 1.

Some of the symptoms and signs are as follows:

Onset.—Of the twenty-four cases, histories were obtained in twenty. Of these, nineteen gave a story

From the Thorndike Memorial Laboratory and the Second and Fourth Medical Services (Harvard), Boston City Hospital and the Department of Medicine, Harvard Medical School.

1. Wilks: Guy's Hosp. Rep. **119**, 1859.
2. Gintrac: Maladies de l'appareil nerveux, Paris **1**: 649, 1869-1871, quoted by Symonds (footnote 9).
3. Quincke: Die Lumbal Punktion des Hydrocephalus, Berl. klin. Wchnschr. **28**: 929-965, 1891.
4. Froin: Les hémorrhagies sous-arachnoïdiennes et de mécanisme de l'hématolyse en général, Thèse de Paris, 1904, quoted by Symonds (footnote 9).
5. Ehrenberg, L.: Hygiea **74**: 849-885, 1912.
6. Fearnsides, E. G.: Intracranial Aneurysms, Brain **39**: 224-296 (Oct.) 1916.
7. McIver, Joseph; and Wilson, George: Spontaneous Subarachnoid Hemorrhage, J. A. M. A. **93**: 89-93 (July 13) 1929.
8. Stengel, A. E., and Wolferth, C. C.: Mycotic Aneurysms of Intravascular Origin, Arch. Int. Med. **31**: 527-554 (April) 1923.
9. Symonds, C. P.: Spontaneous Subarachnoid Hemorrhage, Quart. J. Med. **18**: 93 (Oct.) 1924.

of sudden onset. This is therefore a constant symptom. Onset usually occurs during exertion, as in playing games, tossing the baby in the air or straining at stool. The sudden onset helps to distinguish this condition from meningitis, in which the patient usually has a few hours of malaise, fever and slight headache.

Headache.—This symptom was present in sixteen of the twenty cases in which histories were obtained. The onset is usually sudden. The patients who go into coma usually remember later that a severe headache had preceded the loss of consciousness.

Coma.—Twenty-one of our twenty-four patients were brought into the hospital either in coma or in a stuporous state. Of the eleven stuporous patients, four died and seven recovered. Of the ten in deep coma, eight died and two recovered. It would seem, therefore, that the presence of coma adds to the gravity of the prognosis.

Vomiting.—This is a frequent symptom and was present in nine of our cases. It is probably due to the sudden increase of intracranial pressure. In six cases it was present at onset.

Neurologic State.—Of the twenty-four patients, seventeen could be roused. Six of these showed varying degrees of confusion. Histories were obtained for four of the six cases and indicated that the hemorrhage was of slightly longer standing than for the average case. Two of the six patients died. The other eleven patients were mentally clear. In meningitis, the patients in stupor or coma are more apt to be disoriented and irrational.

All but three of the twenty-two patients examined for the presence or absence of a stiff neck had this symptom. Stiff neck occurs early in the disease and is due to meningeal irritation. It is so constant that its presence in any patient should bring up the possibility of subarachnoid hemorrhage. The stiff neck may be mild at first and increase later. The Kernig sign is frequently present and is due to meningeal irritation.

None of the cases showed a large subretinal, usually single hemorrhage as described by Doubler and Marlow,[10] Hale-White [11] and Symonds. Two of our cases showed numerous fresh retinal hemorrhages. One of these patients had marked hypertension and a history of nephritis, and the hemorrhagic areas were flame-shaped. The other patient had hypertension (190 systolic) with no evidence of nephritis. Doubler and Marlow demonstrated that with subarachnoid hemorrhage the blood went down the optic sheaths and through the lamina cribrosa and ruptured through the retinal and hyaloid membrane. The patients with these large hemorrhages were associated in the cases described by the aforementioned writers with ruptured aneurysm of the internal carotid artery, usually near its termination.[12]

One patient had a paralysis of the left fourth nerve on entry. This nerve is fairly frequently involved. It occurred once in one of McIver and Wilson's cases [7] and in one of Richardson's cases.[13] Our patient showed no improvement in the paralysis while in the hospital, and complained of diplopia.

10. Doubler, F. H., and Marlow, S. B.: Hemorrhage into Optic Nerve, Arch. Ophth. **46**: 533 (Nov.) 1917.
11. Hale-White: Tr. Clin. Soc. London **28**: 5, 1895.
12. Goulden, C., and Riddoch, G.: Communication on the Relationship Between Subarachnoid and Intra-Ocular Hemorrhages, Brit. J. Ophth. **9**: 209 (May) 1925. Calhoun, F. P.: Ocular Symptoms of Subarachnoid Hemorrhage, J. A. M. A. **87**: 1104 (Oct. 2) 1926.
13. Richardson, C. W.: Spontaneous Subarachnoid Hemorrhage; Report of Four Cases, Boston M. & S. J. **194**: 340 (Feb. 25) 1926.

LABORATORY OBSERVATIONS

Spinal Fuid.—This is under increased pressure and is always bloody. It may vary in color from a pink to a dark red or a deep orange, depending on the degree and duration of the bleeding. One of Symonds' patients had a red blood cell count in the spinal fluid of over 3,000,000 per cubic millimeter. At first the white blood cells in the spinal fluid are proportional to the number of red blood cells. Then the number becomes slightly elevated, usually because of an increase in the polymorphonuclears; later, because of an increase in the lymphocytes. The supernatant fluid is faintly xanthochromic within from three to four hours after the onset and gradually becomes more xanthochromic. Usually the fluid is clear and colorless at the end of from ten days to two weeks. Care should be taken to distinguish bloody spinal fluid from a bloody tap (blood due to trauma of needle). The absence of clot, the uniformly bloody character of the fluid (when collected in the three tubes), and the xanthochromic supernatant fluid indicate a subarachnoid hemorrhage as against a bloody tap.

Leukocytosis in the Blood.—Of the twenty patients on whom white blood cell counts were done, eighteen had over 10,000 white blood cells per cubic millimeter. The average white count was 13,670 per cubic millimeter. One patient had over 20,000 white blood cells per cubic millimeter. The slight elevation in white blood cell count again confuses the condition with meningitis. There is no correlation between the white count and the outcome.

Fever.—The temperatures recorded in table 1 were the highest temperatures during the illness, excluding agonal rises. In the twenty-four cases, seventeen had temperatures of 99.5 F. or over. A temperature of 100 F. or over during the illness is the rule rather than the exception. Here again is a state of affairs which confuses the differentiation of meningitis from subarachnoid hemorrhage, although in subarachnoid hemorrhage the fever corresponds usually to the time of greatest hemolysis and absorption of pigments (first week).

Albuminuria and Glycosuria.—One case showed sugar and acetone in the urine with no previous history of diabetes and was at first thought to be a case of diabetic coma. However, the spinal fluid manifestations, the history of sudden onset, and the presence of severe headache established a diagnosis of subarachnoid hemorrhage. Most of our patients had albumin in the urine in slight amounts. Only two patients showed gross albuminuria and both of these had a few casts; one recovered and one died.

Claude Bernard, in his classic experiment, demonstrated that puncture of the fourth ventricle produces an increase in the volume of urine and often causes albuminuria as well as glycosuria.[14] Glycosuria and acidosis are known to occur as a result of hemorrhage in the region of the fourth ventricle. It is possible that such a mechanism is responsible for albuminuria in some of our cases.

Table 2 illustrates the similarities and differences of subarachnoid hemorrhage and meningitis.

The striking picture in subarachnoid hemorrhage is sudden onset, headache, stiff neck, bloody spinal fluid with no clots; in meningitis, gradual onset, stiff neck, cloudy spinal fluid with clots.

14. Schneider: Les albuminuries des hémorrhagies ménin, Thèse de Paris, 1910, quoted by Symonds (footnote 9).

TABLE 1.—*Observations in the Authors' Series*

			Subarachnoid Hemorrhage																
			Onset		Symptoms			Neurologic						Laboratory					
No. of Case	Age	Sex*	How and When	Symptoms	Headache	Stupor Coma	Vomiting	Mental	Stiff Neck	Kernig's Sign	Eye-grounds	Miscellaneous	Associated Diseases	Albumin	Sugar	White Blood Cells	Blood Pressure	Highest Temperature	Outcome	Comment
1	17	♀	Sudden, 6 hrs. before	Headache	++	++	+++	Clear	++	Not done	Early papilledema left eye	Tendon reflexes absent	None	0	0	19,000	130/ 68	98.6	Recovery	Fluid grossly bloody
2	24	♀	Sudden, same day	Headache; vomiting	++	+++	+++	Clear	+++	Not done	Negative	None	None	0	0	10,600	100/ 60	100	Recovery	Admitted with headache; vomiting; 4 days later, fever, stiff neck, fluid grossly bloody
3	27	♀	Sudden, 4 days before	Mental confusion	?	++	0	Confused; incontinent	++	++	Negative	None	Onset 17 days post partum	Not done	Not done	Not done	140/ 90	104	Died	Fluid grossly bloody
4	34	♀	Sudden, 8 hrs. before	Headache; vomiting	+++	0	+++	Normal	++	++	Negative	Weak right VII nerve	None	Slightest possible trace	Trace	10,200	110/ 80	99-100	Recovery	Fluid grossly bloody
5	37	♂	Sudden, 6 hrs. before	Collapse	?	+++	0	Not roused	0	0	Negative	None	Hypertension	Not done	Not done	Not done	220/ 80	101	Died, 1 hour	Fluid grossly bloody; moribund
6	37	♀	Sudden, 1 hour before	Dizziness; convulsions	?	+++	0	Coma; convulsions	Not done	0	Normal	Pupils unequal	Hypertension	Not done	Not done	15,400	210/ 95	100	Died, 1 hour	Tonic, clonic convulsions; fluid grossly bloody; intracranial pressure, 500
7	42	♂	Sudden, 2 days before	Headache; unconscious	+++	++	0	Drowsy; rational	++	0	Negative	None	None	0	0	12,700	148/ 84	100-104	Recovery	Fluid grossly bloody
8	43	♀	Sudden, 6 hrs. before	Headache; vomiting	++	++	++	Episodes; semicoma	0	0	3 small hemorrhages	Left Oppenheim	None	0	0	18,250	125/ 85	99.5	Recovery	Spells of unconsciousness; 1 lumbar puncture. clear, colorless fluid, 26 r.b.c.; 2 lumbar puncture, bloody fluid; intracranial pressure 500+
9	44	♀	Sudden, 2 days before	Headache; stiff neck	+++	+	++	Clear	+++	++	Many fresh flame-shaped hemorrhages	Paralysis VI nerve	Hypertension; chronic nephritis	0	0	15,600	220/110	100	Died, home after discharge	Grossly bloody fluid; probable cerebral hemorrhage at home
10	50	♂	?	?	?	+++	0	Coma	++	Not done	Negative	Bilateral Oppenheim	None	Slightest possible trace	0	Not done	Not done	99.4	Died, 12 hours	Fluid cloudy pink
11	50	♀	Sudden, 12 hrs. before	Headache; vomiting	++	0	+++	Slightly irrational	++	++	Many fresh flame-shaped hemorrhages	None	Hypertension	0	0	12,000	190/110	98.6	Recovery	Fluid pinkish xanthochromic
12	50	♂	?	?	?	+++	0	Stuporous; irrational	+++	++	Negative	None	Mild hypertension	Few hyaline casts, large trace	Trace	11,200	190/100	100	Recovery	Fluid pinkish xanthochromic
13	50	♀	Sudden, 1 day before	Headache; collapse	+++	++	0	Clear if roused	+++	++	Negative	None	Diabetes, acidosis	Trace	+++	3,400	150/100	100	Died, 4 days	Sudden death after good progress
14	51	♀	Sudden, 1 week before	Headache; dizziness; vomiting	+++	+++	+++	Not roused	++	++	Slight sclerosis	None	Hypertension; chronic nephritis with uremia	Many casts, very slight trace	0	20,650	160/100	100	Died, 8 hours	Nonprotein nitrogen, 138; markedly xanthochromic fluid
15	55	♀	Sudden, 4 hrs. before	Headache; collapse	+++	++	0	Clear	+++	?	Negative	None	Slight hypertension	0	0	14,500	190/110	102	Recovery	Grossly bloody fluid; right hemiplegia developed 2 weeks after admission
16	56	♀	Sudden, 12 hrs. before	Headache; collapse	+++	++	0	Clear if roused	+++	++	Negative	Knee jerks unobtained	Hypertension	0	0	10,050	180/ 90	102	Recovery	Grossly bloody fluid
17	60	♂	Sudden, 6 weeks before	Headache; pains left side of body	+	0	0	Clear	++	Not done	Negative	None	Old tuberculosis	0	0	11,000	130/ 58	99.0	Recovery	Xanthochromic fluid
18	60	♀	Sudden, 1 day before	Headache; dizziness	+++	++	0	Clear	++	0	Negative	None	Bronchopneumonia; septic parotitis	Occasional bg casts, large trace	0	8,900	150/100	99	Died	Grossly bloody fluid
19	62	♀	Sudden, 3 days before	Backache; collapse	?	+++	0	Not roused	Not done	0	Sclerosis	Bilateral Babinski flaccidity	Slight arteriosclerosis	Not done	Not done	13,600	135/100	101.5	Died, 3 days	Grossly bloody fluid obtained at postmortem
20	62	♂	Sudden, 1 day before	Convulsion; headache	+++	++	++	Irrational	+++	++	Negative	Negative	None	Very slight trace	0	18,000	120/ 60	100-101	Recovery	Grossly bloody fluid; pressure, 550
21	65	♀	?	?	?	+++	0	Coma	+++	++	Negative	None	Hypertension	Not done	Not done	Not done	270/120	97.6	Died, 1 hour	Grossly bloody fluid
22	69	♂	Gradual,1 week before	Headache; slight aphasia; slight confus.	+++	+	0	Slight mental confusion	0	0	Flame shaped hemorrhage	None	Hypertension; arteriosclerosis	Slight trace	0	16,000	240/130	98.6	Recovery	Bloody xanthochromic; improved after taps
23	70	♀	?	?	?	+++	0	Irrational when roused	++	Not done	Negative	None	Hypertension	Not done	Not done	15,600	200/160	100	Died, 4 days	Xanthochromic fluid 4 days after onset
24	75	♀	Sudden, 12 hrs. before	Headache; vomiting	+++	+++	++	Not roused	++	++	Slight arteriosclerosis	None	Hypertension; arteriosclerosis	Slightest possible trace	0	17,600	200/110	100	Died, 24 hours	Grossly bloody fluid; markedly xanthochromic fluid

* In this column, ♂ indicates male; ♀, female.

TABLE 1.—*Observations in the Authors' Series—Continued*

No. of Case	Age	Sex	Onset		Symptoms			Cerebromeningeal Hemorrhages						Laboratory				Outcome	Comment
			How and When	Symptoms	Headache	Stupor Coma	Vomiting	Mental	Stiff Neck	Kernig's Sign	Eye-grounds	Miscellaneous	Associated Diseases	Albumin	Sugar	White Blood Cells	Blood Pressure	Highest Temperature	
								Neurologic											
1	34	♂	Sudden, 3 days before	Headache	+++	+	0	Clear	+++	++	Congestion	Left hemiplegia; bilateral Babinski	Chronic alcoholism	0	0	12,850	126/ 80	100	Died, 2 days	Grossly bloody fluid
2	49	♀	Sudden, 5 days after	Headache	++	0	0	Normal	++	++	One fresh retinal hemorrhage	Previous left hemiplegia	Hypertensive heart	Very slight trace	0	10,100	210/118	100-102	Died, 1 month	Hemorrhage occurred 5 days after admission for cerebral hemorrhage
3	55	♂	Sudden, 12 hrs. before	Headache	+++	++	0	Clear	+++	++	Slight blurring of disk margin	Left hemiparesis	None	0	0	9,700	130/ 80	98.6	Recovery	Grossly bloody; similar onset 2 weeks before
4	60	♂	?	?	?	++	0	Not roused	Not done	Not done	Negative	Left hemiplegia	Hypertension; arteriosclerosis	0	0	24,500	200/110	100	Died, 1 week	Grossly bloody fluid
5	60	♀	Sudden, 2 days before	Collapse; paralysis	?	+++	0	Not roused	Not done	0	Sclerosis; pulsation	Left hemiparesis	Syphilis; syphilitic heart; aortic regurgitation	Not done	Not done	Not done	210/ 50	101	Died, 3 days	Nonprotein nitrogen, 69; grossly bloody fluid
6	65	♂	Sudden, 12 hrs. before	Headache; increase; coma	++	+++	0	Increased coma	+++	0	Not made out	Twitching right arm	Cardiac decompensation; hypertension	0	0	11,600	215/130	100	Died, 6 days	Grossly bloody fluid
7	70	♀	Sudden, 9 days before	Headache; vomiting	++	0	+++	Clear	+	0	Negative	Left hemiparesis	Hypertension	0	0	15,000	160/104	98.6	Recovery	Xanthochromic fluid

* In this column, ♂ indicates male; ♀, female.

ASSOCIATED DISEASES

The most frequently associated condition in our series was hypertension. Of the twenty-three patients whose blood pressure was taken, twelve had a systolic blood pressure of 160 or over. Of these, seven had a systolic pressure of over 190. This association appears to be too frequent to be accidental. Hypertension plays a more important etiologic rôle in subarachnoid hemorrhage than is generally believed. A subarachnoid hemorrhage may result from the bursting of a congenital aneurysm under the strain of hypertension, or vascular changes may take place in the subarachnoid vessels which may then give way under the stress of hypertension. We believe that hypertension has a definite etiologic rôle, especially in older patients. None of our patients had syphilis: all had negative Kahn and Wassermann tests of the blood serum and spinal fluid.

TABLE 2.—*Comparison of Meningitis and Subarachnoid Hemorrhage*

	Meningitis	Subarachnoid Hemorrhage
	Similarities	
Headache	Present	Present
Stupor	Usual	Usual
Vomiting	Frequent	Frequent
Stiff neck	Present	Present
Kernig's sign	Usual	Usual
Leukocytosis	Present	Present (less marked)
	Differences	
Onset	Gradual (at least several hours of malaise, etc.)	Sudden
Mental picture	Frequently irrational	Usually clear; occasionally irrational
Fever	Present and high	Often present and slight
Blood pressure	Normal	Frequently elevated
Eyegrounds	Negative (slight choking)	Occasionally large subhyaloid hemorrhage
Spinal fluid	Cloudy and clots	Bloody or xanthochromic; no clots

Miscellaneous diseases associated with subarachnoid hemorrhage were: hypertension, twelve (seven died, five recovered); pulmonary tuberculosis (fibroid), one (recovered); diabetes with acidosis, one (died); post partum with hemorrhage, one (died), and bronchopneumonia, septic parotitis (complication), one (died).

TABLE 3.—*Ages, Recoveries and Deaths in Groups With and Without Associated Conditions*

Age	No Associated Disease	Associated with Other Conditions: Hypertension 160-189	Hypertension 190	Others
Under 40 years (3 recoveries) (3 deaths)				
Recoveries	3	0	0	0
Deaths	0	0	2	1
40 to 60 years (7 recoveries) (4 deaths)				
Recoveries	2	4	0	1
Deaths	1	1	1	2
Over 60 years (2 recoveries) (4 deaths)				
Recoveries	1	0	1	0
Deaths	1	0	3	0
Total				
Recoveries	6	4	1	1
Deaths	1	1	6	3

Table 3 lists the ages, recoveries and deaths in groups with and without associated conditions. One case was not classified because the blood pressure was not recorded.

From this table it may be seen that all three deaths in the youngest group occurred in patients with definite

complications, while single deaths occurred in each of the other groups without obvious associated disease (although it is quite likely that some arteriosclerosis was present in the patient in the group over 60 years of age). It is interesting that hypertension is important not only etiologically but prognostically. Of the seven patients with marked hypertension (over 190), six died.

AGE

The average age for these patients was 50 years; the youngest patient was 17 years old. However, it must be noted that subarachnoid hemorrhage is by no means confined to persons of middle age and in this respect differs from other cerebral hemorrhages. There were several patients in the twenties. The average age of Neal's[15] patients was 27 and of Symonds',[9] 30, while the average of her arteriosclerotic group was 57. In the younger patients, congenital defect in the wall of the blood vessel seems to be the most logical explanation. Small aneurysms are commonly found in the brains of young people, and a rupture of one of these might cause a subarachnoid hemorrhage.

PROGNOSIS

The mortality rate of the entire group was 50 per cent. The mortality rate of Neal's cases was 40 per cent. Of the seven patients with subarachnoid hemorrhage and without associated diseases, only one died. Ten out of the sixteen patients with associated diseases died. Of the seven cases with marked hypertension (over 190 systolic), all but one died (table 2).

It would seem that the prognosis in uncomplicated subarachnoid hemorrhage is good. The presence of associated diseases, especially of marked hypertension, adds considerably to the gravity of the prognosis.

AUTOPSY OBSERVATIONS

There were five autopsies. It is interesting that the five patients were all in deep coma on arrival at the hospital; there were only six in deep coma who could not be aroused in the entire group, and all of these died. The autopsy observations demonstrate the difficulty in differentiating spontaneous subarachnoid hemorrhage from cerebromeningeal hemorrhage in cases admitted in deep coma. Only one of these was a typical case of spontaneous subarachnoid hemorrhage at the postmortem (case 19).[16] In this case there was a hemorrhage going over the lateral surface of the right frontal lobe. The origin of the hemorrhage could not be determined. Another had a superficial hemorrhage into the septum pellucidum with rupture into the ventricle and extension through the pia arachnoid of the brain stem. The other three were cases of cerebral hemorrhages with extension into the subarachnoid space and therefore really belong in the cerebromeningeal group. Aneurysms were not found in any of the postmortem examinations. Unfortunately, no autopsies were obtained on patients who were not in coma on entry.

We may say from these results that accurate diagnosis in patients in deep coma is impossible.

TREATMENT

Symonds recommends lumbar punctures in the early stage only for increased pressure; otherwise a reduction in spinal fluid pressure might increase the tendency to bleed. He advises daily lumbar punctures later to remove the bloody fluid, the source of irritation to the meninges. Our patients all had daily lumbar punctures during the early stage. If the pressure was elevated, the fluid was withdrawn slowly until the pressure was lowered to from 100 to 150 mm. of water. Stiff neck and headache are sometimes quite persistent, the latter occasionally lasting from ten days to two weeks. We believe that daily lumbar puncture, removal of some of the fluid with reduction of the pressure, offers a marked relief. None of our patients showed any evidence of renewed bleeding in spite of the numerous lumbar punctures. We believe that this danger is minimized if the pressure is lowered very slowly. The danger is probably real in the few hours after the hemorrhage takes place. In the early stage, ice caps and salicylates may be used for the headache. Opiates are contraindicated, as in all cases of increased intracranial pressure, because of the danger of respiratory failure.

Usually the spinal fluid pressure becomes normal after the third or fourth lumbar tap. Persistently elevated pressure should bring up the possibility of a cerebral neoplasm as the underlying cause. This occurred in one case outside, proved at autopsy, not included in this group.

CEREBROMENINGEAL HEMORRHAGES

Besides the twenty-four cases of clinical subarachnoid hemorrhage, we found seven cases classified as subarachnoid hemorrhage but with neurologic manifestations to indicate a definite amount of cerebral damage (table 1). All but one of these patients had a left hemiparesis or left hemiplegia, and one had twitching of the right arm. The youngest in the group was a 34 year old chronic alcoholic addict, and the average age of the group was 56, distinctly higher than the other group. The onset was sudden in all cases, and stiff neck was found in all the five cases recorded. Five of the seven patients had hypertension. The prognosis was apparently worse in this group since only two recovered, a mortality rate of about 70 per cent. There was one postmortem (case 1), which showed a large hemorrhage into the external nucleus with rupture through the pia and over the insula.

Outside of the neurologic observations, these cases are entirely similar to those of subarachnoid hemorrhage. The treatment is identical to that of spontaneous subarachnoid hemorrhage.

SUMMARY AND CONCLUSIONS

1. Subarachnoid hemorrhage occurs much more frequently than is generally believed. We have gathered twenty-four cases in eighteen months between July, 1929, and January, 1931. This number is about one fifteenth the number of cases of cerebrovascular accidents and about equal to the number of cases of subacute bacterial endocarditis, a much better known condition.

2. Subarachnoid hemorrhage is a striking syndrome with sudden onset, usually with headache, occasionally vomiting, dizziness, stupor or coma, and rarely convulsions. Stiff neck, Kernig's sign, fever and slight leukocytosis serve to confuse it with meningitis.

3. Hypertension is present frequently (twelve out of twenty-four cases). Systolic blood pressure over 190 was present in seven patients, of whom six died. We believe that hypertension and arteriosclerosis play an important rôle etiologically and prognostically.

15. Neal, Josephine B.: Spontaneous Meningeal Hemorrhage, J. A. M. A. **86**: 6 (Jan. 2) 1926.

16. The other four cases, although clinically cases of subarachnoid hemorrhage, therefore belong to the cerebromeningeal group.

4. The average age of our group was 50, the youngest being 17 and the oldest 75. This is higher than in Neal's and Symond's series.

5. Only one patient without an associated or a complicating disease died. Of the ten with an associated or a complicating disease, seven had hypertension (six over 190 systolic), one had diabetes with acidosis, one had bronchopneumonia and septic parotitis, and in one it occurred during the puerperium.

6. Five postmortems were done in the spontaneous subarachnoid group. These were all in patients brought into the hospital in deep coma. All but one showed cerebromeningeal hemorrhages. Of six patients entering in coma, all died. Coma adds to the gravity of the prognosis and obscures signs of gross cerebral damage.[17]

7. Seven cases of cerebromeningeal hemorrhage are briefly discussed. They may be differentiated clinically if they show evidence of brain injury (hemiplegia, Babinski reflex).

8. The treatment in these cases consisted of daily lumbar puncture until the spinal fluid pressure remained normal, and sedatives, ice caps, and the like for the headache.

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EFFECT OF AIR FILTRATION IN HAY FEVER AND POLLEN ASTHMA

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This experiment was undertaken to determine the measure of relief that can be afforded the sufferer with uncomplicated hay fever by placing him in a room supplied with filtered air.

It seemed desirable also to learn whether comparative freedom from pollen irritation for a portion of the twenty-four hour period would establish reasonable personal efficiency for the remainder of that period. Pollen asthma was studied to determine the time element necessary to give relief. The efficiency of the commercial apparatus for pollen removal was studied.

HISTORICAL

The earliest work on air filtration was that of Storm van Leeuwen,[1] who in 1924 described "miasm free" rooms used in the treatment of asthmatic patients. He developed a dust and miasm free chamber into which filtered air was pumped. Many of his asthmatic patients sleeping in such a room were partially relieved and could go about their work during the day with comfort, while others were entirely relieved of asthma by spending the night in the chamber. Since the earlier work, Storm van Leeuwen [2] has made a number of modifications to simplify his filtering apparatus.

In 1925, the Leopolds [3] at the University of Pennsylvania studied a group of cases under conditions in which not only the air was dust and pollen free but the temperature and humidity were controlled as well. Their work points to the possibility of controlling attacks in asthmatic patients sensitive to dust. The appliances used by both Storm van Leeuwen and the Leopolds were large and cumbersome, too costly to be easily adapted for use in a patient's home.

Later work with simplified mechanical construction was described by Cohen [4] in 1926. In his first filtering apparatus, the air taken through an opening in the window was delivered by a motor-driven fan through a filter of woven wool and cotton cloth, at the rate of from 140 to 180 cubic feet a minute. The room, which was closed but not hermetically sealed, was put under slightly positive pressure by the incoming current, so that the cracks about the doors and windows acted as outlets for the filtered air. Four ragweed sensitive cases are reported by Cohen in the preliminary study. A patient with very severe asthma required constant confinement in the room. Another patient with autumnal asthma was freed from acute symptoms after the first thirty-six hours of constant confinement. He then had to remain in the room most of the time for the next four days, after which he was able to remain outside for from eight to ten hours a day. A third patient, who had hay fever only, remained in the room eighteen hours a day for the first two days, after which he was able to be out from four to eight hours a day, depending on the pollen concentration outdoors. The fourth, also a non-asthmatic hay fever patient, was able to be outdoors eight hours a day.

Cohen [5] made a second study with an improved apparatus, which eliminated the spread of lint from the cotton and wool filter material. The machine used is reported as delivering 250 cubic feet of 99 per cent + pollen free air a minute. Such an apparatus was installed in each patient's bedroom just before the onset of the pollen season. The number of cases studied is not mentioned by the author. He reports that the number of hours necessary for the patient to be in pollen free air to obtain relief from symptoms varied with the pollen concentration outdoors. A shorter confinement period was required early and late in the season, while a much longer time was necessary at the height of the season. In midsummer, eight hours daily in the room was sufficient for mild cases, and from twelve to eighteen hours daily for severe cases. These observations were made on patients who began to use the filters before the development of hay fever symptoms. In asthma cases in which the patient came under observation after the symptoms had already developed, from two to seven days of confinement in filtered air was necessary for relief, after which the patients were able to be out for a part of the day with some comfort.

I. S. Kahn,[6] in discussing this report, mentions patients in Texas who require a much longer period of constant confinement to be cleared of asthma—twelve days for one, from one to two months for others, and as long as five months for one.

Peshkin and Beck,[7] in 1930, described a new and simplified portable filter which they state overcomes the objectional mechanical features of comparable air filters then in use. The essential difference is the filter screen, which is composed of several layers of a cellulose

17. Accurate differential diagnosis in comatose patients between cerebromeningeal and subarachnoid hemorrhage was impossible in our series.

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1. Storm van Leeuwen, W.: Proc. Roy. M. Soc. (Section on Therapeutics and Pharmacology), part 3, **17**: 19 (April) 1924.
2. Storm van Leeuwen, W.: München. med. Wchnschr. **77**: 726-729 (April 25) 1930.
3. Leopold, S. S., and Leopold, C. S.: Bronchial Asthma and Allied Allergic Disorders, J. A. M. A. **84**: 731 (March 7) 1925.
4. Cohen, M. B.: M. J. & Rec. **123**: 322 (March 3) 1926.
5. Cohen, M. B.: Clin. Med. & Surg. **34**: 276 (April) 1927; J. Lab. & Clin. Med. **13**: 59 (Oct.) 1927; 963 (July) 1928.
6. Kahn, I. S., in discussion on Cohen (footnote 5, third reference).
7. Peshkin, M. M., and Beck, Isabel: J. Lab. & Clin. Med. **15**: 643 (April) 1930.

product held between a stiff open faced netting. The screen is corrugated and has a surface area of 8 square feet. The motor is equipped with three speeds, capable of producing 180, 250 and 400 cubic feet of air a minute. The apparatus is constructed so that filters can easily and quickly be replaced as often as required.

APPARATUS

The apparatus used in these experiments was an air filtration unit built by the American Air Filter Company. Two of these units were presented to the university for the conducting of these experiments. Each unit contained six filter forms with approximately 3 square feet of filter surface each. The edges of the filter forms rested on a felt covered frame on the top of the compartment in which was located the fan that propelled the air from outside the building into the room.

The filter material was of the cellulose type resembling ordinary filter paper but with a much larger porosity. The filters are sold on the market in varying thickness. Those used in our experiments were ten ply, and double sheets were used. Our experience with these filters in an apparatus used in connection with the drying of proteins led us to believe that the pollen granules could be filtered out of the air by their use. The pollen grains that made up the count in the experimental ward undoubtedly for the most part did not go through the filters but through small leaks in the machines. While such leaks are of no consequence in air filtration for the removal of dust in ventilating systems, they must be eliminated as far as possible in machines for the removal of pollen from the air. Even very low pollen counts have an undesirable effect on individuals who are highly sensitive to pollen. This fact must be fully appreciated by the manufacturers of commercial apparatus in order that the necessary efficiency may be attained.

The filter material was changed daily. The fan was shut down and the damper in the duct from the outside

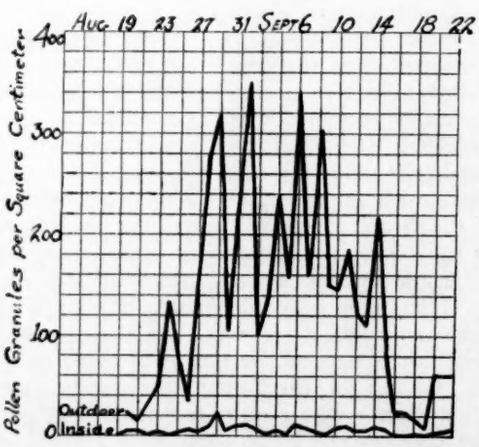

Fig. 1.—Pollen counts per square centimeter taken in filtered air room and outdoors.

was closed. The forms were removed gently and placed on a sheet and taken to another room for the filter replacement. Our experience leads us to suggest that machines used for this purpose should be built so that there is no danger of pollen being carried into the machine beyond the filter sheets when the forms are being removed for the changing of the filters. In fact, a safer construction arrangement would be to have two sets of filters in series. If the first one is of such size that the velocity of the flow of air through it is very low, the efficiency can be still further increased. Our experimental eight bed ward had a cubical content of 7,500 cubic feet. The filter machines renewed this air approximately every six minutes.

PROCEDURE

Pollen counts were made daily in the room, both directly in front of the outlet of each machine and at points distant from them. Counts were also made out-

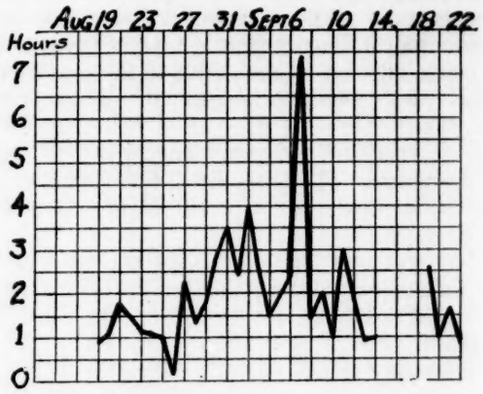

Fig. 2.—Average time required for maximum relief from hay fever symptoms on various days of the experiment.

doors from a slide placed on a porch adjoining the room. The technic used in making pollen counts was that of Acquarone and Gay.[8] As pointed out by Duke,[9] the estimates of the pollen content of the outside air are not more than relatively accurate because of the many variable factors. In the room, however, most of these variable factors were not operative, the currents of air being about the same during the entire period of the experiment. The pollen counts in the room, however, are not an absolute index of the efficiency of the filtering apparatus. The counts varied little whether taken immediately in front of the machines, with the air currents sweeping directly over the slides, or when taken at a point away from direct currents.

The pollen counts in the room (chart 1) showed five or less pollen grains for each square centimeter on eighteen of the thirty-four days of the experimental period, ten or less on twenty-nine days, between ten and thirteen on five days, and a count of twenty-three on the day that a patient tampered with one of the machines. That night all the occupants in the room had moderate hay fever symptoms. While there was a slight rise of the pollen concentration in the room during the height of the pollen season, there was no tendency to follow closely the periodic rise and fall recorded outside the room. The absence of even approximate correspondence in the outdoor and indoor pollen curves renders it difficult to determine the precise filtration efficiency of the apparatus. Taken over the entire period, however, including the day it was tampered with, this was 95.4 per cent. During the major part of the experiment it was over 98 per cent. This approximates the 99 per cent plus filtering efficiency reported by Cohen with his apparatus.

The feeling of stuffiness complained of on most days was somewhat but not entirely relieved by increasing the air movements in the room. This was done by opening a transom leading to an adjoining hall and

8. Acquarone, Paul; and Gay, L. N.: J. Allergy **2**: 336 (July) 1931.
9. Duke, W. W.: J. Allergy **2**: 471 (Sept.) 1931.

having an electric fan move the air in that direction. The discomfort was severe on the days when the temperature and humidity were higher than in either the adjoining ward or on the outside. The higher temperature in our filtered air ward may have been due to the fact that air was pumped into the room during the hottest periods of the day.

One hundred and five patients were selected from a large group of applicants and admitted for study. Those who gave typical symptoms of autumnal hay fever either with or without asthma and with positive skin reactions to the ragweeds were chosen. They were divided into groups of eight, men alternating with women, each group for one week's observation. No case was therefore observed for more than seven days. The hay fever cases were usually kept under observation for only three or four days. They were admitted into the ward at 8 p. m. and permitted to leave at 10 a. m. Those with asthma were kept in the room during the entire period of observation except in special cases, when they were sent outdoors to observe the effect of exposure to pollen. All patients were interviewed morning and night, and full reports were made of the

TABLE 1.—*Time Required for Maximum Relief in Patient Nights*

Hours	¼	½	¾	1	1½	2	2½	3	3½	Over 3½	No Relief	No Notation
Patient nights	9	13	1	20	8	20	5	10	3	10	8	8

TABLE 2.—*Degree of Relief Obtained*

Relief	Complete	Moderate	Slight	No Relief	No Notation
Patient nights	49	51	2	8	5

TABLE 3.—*Symptoms of Hay Fever Present in the Morning*

Symptoms	No Symptoms	Slight	Moderate	Marked	No Notation
Patient nights	25	51	25	13	1

time required and degree of relief obtained, as well as the time of appearance and degree of symptoms experienced outside. This report, however, is based on sixty-six cases, the others being omitted either because the patient left after only one night of observation and the data obtained were insufficient, or because of intercurrent infections.

OBSERVATIONS

The patients in this study can be classified into three groups: (1) uncomplicated hay fever cases, (2) combined hay fever and asthma cases, and (3) pollen asthma cases.

We observed thirty-five patients with uncomplicated hay fever of the autumnal type, spending 115 nights in the filtered air ward. The data compiled in the accompanying tables from the 115 nights gives the maximum relief obtained in time period and degree together with the degree of symptoms present in the morning, as well as the number of night attacks.

The average time required for maximum relief from hay fever symptoms on various days of the experiment is shown by chart 2.

Definite night attacks occurred in sixteen instances and consisted of hay fever symptoms only.

In 83.2 per cent of the uncomplicated hay fever cases studied without regard to the severity of the symptoms on entering the filtered air ward, relief of the symptoms was obtained either completely or moderately in three and one-half hours or less. In 7.5 per cent no relief was obtained, and in 13.9 per cent definite night attacks of hay fever occurred. In comparing the length of time necessary to obtain relief at different periods of the experiment, it was noted that in general the longest time required for relief occurred at the peaks of the pollen season. This bears out Cohen's [10] observations that the heavier the dose of pollen to which one is subjected, the longer time is required for relief of symptoms after entering the filtered air chamber. All the patients with uncomplicated hay fever reported that although symptoms as a rule appeared promptly on going outdoors, they believed that the degree of discomfort was less than they would have experienced had they not had from eight to ten hours of comparative relief during the preceding night. It was the opinion of most of the patients observed that their personal efficiency was definitely increased because of relief from pollen irritation during the night.

In our second group were ten patients showing combined symptoms of hay fever and asthma, either all the time or only part of the time. The average time for maximum relief from the hay fever symptoms was 1.2 hours, and the degree of relief was more complete than in the uncomplicated hay fever cases. The hay fever symptoms ceased as the asthma set in. Hay fever symptoms appeared very much sooner than did the asthma or asthmatic cough when the patient left the room. It was impossible to arrive at a definite average time for maximum relief of the asthma because most of the asthmatic attacks developed during the night, while the patients were in the room. Out of the thirty-two patient nights for these ten patients, only five night attacks of hay fever occurred, and these were of a mild nature, as compared to eleven night attacks of asthma, the majority severe enough to require epinephrine for relief. Several of these attacks were of a more severe nature than those which occurred during the day.

Twenty-one seasonal asthma cases sensitive to ragweed pollen were under observation, two from August 18 to August 22, the rest from September 2 to September 23. Two of the patients left after only one night of observation because of insufficient or no relief during this period. The others were observed for periods varying from two to seven days, the majority from four to seven days. All except two were kept in the room continuously except for the brief intervals necessary to attend to natural functions. The relief obtainable in these cases differed markedly from that observed in uncomplicated hay fever cases. All of them required epinephrine because of severe asthmatic attacks. Six of the twenty-one patients were observed for seven days. Of these, two required epinephrine for two days, two for three days, and two for the full seven days. The required dosage varied from 8 minims (0.5 cc.) several times a day and during the night in mild cases to 15 minims (1 cc.) every two to three hours in the severe cases. The dyspnea became less acute in all except two cases after the patients were in the ward twenty-four hours. These two required four days before feeling relieved from acute distress. Humidity seemed to be an important factor in all the asthma cases observed. The symptoms were much more severe during and following rainy days.

10. Cohen (footnote 5, third reference).

The objective manifestations of prolonged expiration and wheezing cleared completely only in two cases: one after five days in the ward, the other after three days in the ward. Neither of these patients had any asthma on reporting back twenty-four hours after their discharge. In the other nineteen cases there was still wheezing on leaving, four of these after seven days of observation in the filtered air.

Four of the patients who had been relieved completely of all subjective asthma and in whom there was only slight wheezing were permitted to go outdoors. All developed asthmatic attacks from one-half hour to one hour after leaving the room. These observations agree with those of Cohen,[10] who reported that relief for pollen asthma is not so readily obtained as for uncomplicated hay fever.

SUMMARY AND COMMENT

Thirty-five patients with uncomplicated autumnal hay fever, protected from pollen during twelve to fourteen hours a day, were in most cases made comfortable in from half an hour to three hours after entering the room with filtered air. The degree of relief was moderate to marked in the majority of cases. A large proportion of patients had recurrences of symptoms of a mild nature while in the room either during the night or on awaking in the morning. All cases manifested symptoms promptly on exposure to unfiltered air. Ten patients with hay fever and asthma and twenty-one with pollen asthma were observed for periods up to seven days. Relief from hay fever symptoms was as prompt as in the first group. Relief from asthma was obtained only after constant confinement of from one to four days. Night attacks of asthma were more frequent in these groups, and of a severer nature than the night attacks of hay fever in the hay fever patients. In spite of constant confinement in filtered air, most pollen sensitive asthmatic patients require epinephrine for relief of acute attacks. It is our impression that in many patients hay fever asthma is not caused by the offending pollen alone. The individuals in this group were exposed to much more pollen during the first few weeks of the hay fever season than was present in the room, without any symptoms of asthma. The persistence of symptoms in spite of protection from pollen suggests either the prolonged action of pollen previously inhaled or the presence of some additional cause for their asthma. The bogginess of the nasal and bronchial mucosa after several weeks of irritation from pollen offers an excellent ground for bacterial growth. It is our belief that a low grade infection of the upper respiratory tract is as much responsible for the asthma in these cases as irritation from pollen.

Considerable discomfort from heat and humidity was experienced by those confined to the room. This may be lessened by increasing the air movement in the room or by shutting off the machine during the daytime for those patients able to be outdoors part of the time.

We expect to continue studies along these lines during the next ragweed pollen season, with additional types of air filters and with air cooling devices.

CONCLUSIONS

1. Air filtration that removes most of the pollen will relieve symptoms of hay fever. It is particularly valuable in those cases not benefited by the usual methods of treatment.

2. Cases of pollen asthma respond slowly to filtered air treatment. In most cases only partial relief was obtained, even after seven days' occupation of the ward. All asthmatic patients studied were decidedly more comfortable in filtered air.

3. Recurrence of symptoms was prompt on exposure to pollen, but in uncomplicated hay fever cases the personal efficiency was increased because of relief from pollen irritation during the eight to ten hours in the filtered air ward.

4. From our results we conclude that it will be possible to increase the efficiency of the commercial air filter for the removal of pollen through some minor mechanical changes.

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THE USE AND ABUSE OF DRUGS IN ASTHMA

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The emphasis that has been given to the study of asthmatic patients by immunologic methods has resulted in so many advances in our knowledge of handling these patients that careful study and cooperation by physician and patient leads to control of the seizures and prevention of their recurrence in the majority.

While there are no drugs that will cure the allergic state or even prevent an attack when the allergic body contacts with a large dose of the specific allergen, various remedies do assist in the control of individual attacks and should be used until the attacks are prevented by specific means. Some of these remedies, such as the iodides, the inhalation of smoke from nitro papers and stramonium leaves, the antispasmodics and opiates, have been in use for years. Hyde Salter[1] given an excellent account of their use in his classic work on asthma, and practically nothing can be added to his observations about most of them. Epinephrine, which has been in use for the past twenty years, and ephedrine, introduced recently, have been widely used, and there are many articles dealing with their pharmacology and clinical application.

Most of the patients whom we see have had various ones of these remedies used with good effect. In some, however, their use had been followed by unfavorable results and in a few by death. It has seemed to us, therefore, that it might be well to review briefly the actions of these drugs, their field of clinical usefulness and their dangers, and to point out some details of the methods of their administrations.

EPINEPHRINE

Epinephrine is the active principle of the medulla of the suprarenal gland. Its action consists in a stimulation of the peripheral end organs of the sympathetic nervous system. It is poorly absorbed from mucous membrane surfaces and slowly absorbed after intramuscular or subcutaneous injection but has an immediate action following its intravenous administration. The action is of but short duration, since epinephrine leaves the blood stream rapidly and is soon oxidized. Its effect can be maintained by continuous intravenous administration of small amounts. Solutions are unstable unless a preservative is added. The effect of this drug

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1. Salter, H. H.: Asthma: Its Pathology and Treatment, first American from the last English edition, New York, William Wood & Co., 1882.

on a patient in an attack of asthma is startling when observed for the first time. Within from five to fifteen minutes after the subcutaneous injection of a suitable dose the paroxysm begins to subside, and usually within thirty minutes it has completely disappeared. The effect following subcutaneous administration lasts for from thirty minutes to two hours. This prolonged effect, several times as lasting as that following intravenous administration, can be explained by the fact of the slow and more or less continuous absorption from the peripheral area, giving the effect of the continuous intravenous administration of minute amounts. The therapeutically active amount for the relief of asthma, therefore, is extremely small. The therapeutic dose is much smaller than that usually recommended. Most textbooks give the dose as from 0.5 to 1.0 cc. (8 to 15 minims) of the 1:1,000 solution, and many physicians give the contents of one ampule (1 cc. of 1:1,000 solution) as a routine. Such doses are very dangerous; they cause attacks of palpitation, cardiac irregularity, intense throbbing headache, vomiting, intense excitability, tremor, blanching of the skin and extreme weakness. These epinephrine reactions are unnecessary, as the full therapeutic effect on asthma can be obtained by small doses. It is a safe rule to give from 0.2 to 0.4 cc. of the 1:1,000 solution (3 to 6 minims) subcutaneously. The attack will subside in most cases in a few minutes; if it does not, the dose should be repeated in twenty minutes.

Patients having severe attacks will have a recurrence of symptoms in a few hours. For these it is well to observe the frequency of recurrence and to administer a dose of epinephrine just before the next attack begins or on its inception. Often the administration of 0.3 cc. of the 1:1,000 solution every three or four hours, day and night, will prevent the symptoms completely, and less of the drug will be needed than if one waits for the attack to be full blown before giving it. For this reason all asthmatic patients should be taught to administer epinephrine to themselves. A glass syringe should be used, and it should be boiled and not sterilized by alcohol, since the small amount of alcohol in the syringe may destroy the drug. The solution used must be crystal clear and colorless. The slightest tinge of color indicates that some of the potency is lost, and when there is obvious pink color the solution is useless. This point is made because so much of the epinephrine solution on drug store shelves and in physicians' bags, especially the ampules, since these contain no preservative, is no longer potent. This explains why some physicians are disappointed with the drug therapeutically and also why doses of 1 cc. are so often given without dangerous reactions.

When given properly, epinephrine is the most valuable remedy that we possess for relief of the acute asthmatic paroxysm.

EPHEDRINE

Ephedrine is the alkaloid of the plant ma huang, which has been used as medicine by the Chinese for centuries. Pharmacologically, its effects on the sympathetic nervous system are similar to those of epinephrine, but the effect is more lasting. It is readily absorbed from the gastro-intestinal tract and its full therapeutic effect can be obtained by oral administration. It has been used in the treatment of patients with asthma since its introduction in 1924 by Chen and Schmidt,[2] but a large experience with it has proved it of less value than was expected from its action in animals. Except in rare instances, a full therapeutic dose will not relieve a severe paroxysm of asthma. It is helpful in continuous doses in preventing mild seizures and does control the wheezing of the mild asthmatic state very well. It is best administered as the hydrochloride or sulphate in doses of from 25 to 65 mg. The effect lasts from four to six hours.

Ephedrine is poorly tolerated by most patients when given alone. It produces wakefulness, bad dreams during sleep, marked weakness, nausea, sweating and, in some patients, cardiac irregularity. The cerebral symptoms can be controlled by administering a small dose of some hypnotic with each dose of ephedrine. It is our custom to prescribe from 5 to 10 mg. of amytal with each 50 mg. of ephedrine hydrochloride. This dose can be given four times daily, evenly spaced between the hours of arising and retiring. Extra doses are useless if an attack supervenes. Epinephrine should be given for such an attack.

Ephedrine, like all alkaloids, is soluble in oils. A 1 per cent solution in oil is useful for nasal use in hay fever but has no place in the treatment of the asthmatic paroxysm.

OPIUM

Some form of opium is recommended in asthma by almost all writers on medical subjects. Morphine is the drug advised by the majority. It is used to dull the excitement and fears of the patient so as to enable him to use his respiratory muscles to the best advantage and because it is supposed to produce bronchiolar relaxation in certain doses. However, when one reviews the pharmacologic action of the drug, one finds that its effects on the bronchiolar musculature are by no means constant and that narrowing of their lumen may follow its administration. Clinical experience with the drug in asthma shows it to be dangerous. For several years we have been asking various allergists their opinions as to the usefulness of opium in asthma, and we have been struck by the almost unanimous opinion that its use is unnecessary, frequently harmful and occasionally fatal. Hyde Salter[1] expressed his opinion as follows:

> To opium in asthma, I have myself a great objection. I do not mean to impugn the correctness of those who profess to have seen benefit derived from it; all I would say is, that I am not certain I have ever seen it do good, that I have often seen it do harm, and that I should have antecedently expected, from its known physiological action, that it would be prejudicial, and tend to increase the very condition for which it is given.

He then discusses the central effects of opium, considers them harmful and then says:

> But, beyond this, opium seems to have a specific tendency to excite involuntary muscular action and induce a temporary spasm. . . . But I would not let any theoretical objection run counter to clinical evidence; and if experience said "give opium," no theory should prevent my recommending it. My own experience, however, coincides with these objections; and *I am disposed to think that the frequency with which it is given in asthma depends upon an unthinking following of routine and a want of close and exact observation.*

Death in an acute attack of asthma is rare, but we have observed it on six occasions. In five cases, death followed within a few hours after the administration of morphine and in one case following the use of codeine. In none of these patients was there any clinical evidence of cardiac disease or other organic pathologic condition sufficient to cause death.

In all there was an increase in the asthmatic symptoms following the drug. The respiration became

2. Chen, K. K., and Schmidt, C. F.: Ephedrine, Proc. Soc. Exper. Biol. & Med. 21: 351, 1924.

progressively more labored, and the patients died respiratory deaths quite comparable to those seen in strangulation. In two cases examined post mortem, the entire bronchial tree was filled with mucous exudate so tenacious that it was difficult to pull it away from the bronchial wall. These patients had been strangled by their own mucous secretion.

There are several possible explanations for these bad effects; the first is that morphine depresses the respiratory center and makes the respiration more shallow; the second, that the abolition of the cough reflex makes it more difficult for the patient to expel the mucus plugs from the bronchial tree, and the third, that opiates are themselves hive producing. Morphine, codeine and other opium derivatives produce wheals when injected into the skin. All individuals are susceptible, but some get very marked reactions following their intradermal injection. Many patients have itching following the hypodermic injection of morphine. It is quite probable that in those asthmatic patients with an idiosyncrasy to opium there is produced by the morphine or codeine a hive reaction in the bronchial tree, which is added to the reaction already present because of the attack. These theories are being studied experimentally to determine whether they explain the phenomena observed. That opiates are contraindicated in asthmatic patients because of their bad effects cannot be doubted by any one with sufficient experience with these patients.

BELLADONNA, STRAMONIUM, HYOSCYAMUS

The effects of belladonna, stramonium and hyoscyamus depend on their atropine content. Atropine paralyzes the innervation of the bronchial muscles and glands, causing bronchial dilatation and lessening of the mucous secretion. The best effects are obtained when the drug is inhaled. This can best be accomplished by inhaling the smoke produced by burning powder composed of powdered stramonium, 1 Gm., and potassium nitrate, 2 Gm., or the smoking of a stramonium cigaret. The smoke of 1 Gm. of stramonium leaves is said to contain from 0.3 to 0.5 mg. of atropine. Most of the asthma cigarets and powders on the market are similar to the formula given, although some contain tobacco, lobelia, anise or other volatile substances. The inhalation of these smokes is followed in a few minutes by cough and expectoration of the mucous plugs which were obstructing the bronchial tree. In some patients the relief is prompt and satisfactory; in others apparently similar clinically, no relief is obtained. Atropine is not nearly so useful when administered by other routes, since it is frequently necessary to give toxic amounts in order to relieve an asthmatic attack, and this can be done much better by epinephrine.

IODIDES, TOBACCO, LOBELIA

Iodides, tobacco and lobelia assist in the relief of mild paroxysms of asthma by their thinning effect on the bronchial mucus. The iodides are excreted directly in the bronchial mucus; tobacco and lobelia produce thinning by their nauseating effect. Iodides are often of use between acute paroxysms, particularly in asthmatic patients with secondary bronchitis. Since the iodides are absorbed from the gastro-intestinal tract with amazing rapidity, their full effect is obtained by oral administration and there is no justification for their administration by the intravenous route.

CALCIUM

Calcium has been used in asthma because of its alleged antiedemic action in diminishing cellular permeability. Recently it has been shown that this action cannot be demonstrated experimentally,[3] and studies by Ramirez,[4] by Criep and McElroy[5] and by Cohen and Rudolph[6] have shown that there is no clinical effect when calcium is administered to asthmatic patients. It should be excluded from the list of remedies for asthma since it will not benefit the patient in an acute attack and has no influence on the recurrence of attacks.

Many other drugs have been used from time to time with supposedly good results. Most of these good results will not stand critical analysis, and the time allotted for this presentation does not permit their discussion.

SUMMARY

Before the attacks of asthma are prevented by proper study and treatment, it is necessary to use drugs to ameliorate the symptoms.

Epinephrine in small doses is the remedy of choice. Ephedrine has a smaller but definite field of usefulness. Opium in all forms is contraindicated because of its dangers. Iodides, if used, should be given by mouth and not intravenously.

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LAXATIVE EFFECTS OF WHEAT BRAN AND "WASHED BRAN" IN HEALTHY MEN

A COMPARATIVE STUDY

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The importance of ingestion of a reasonable amount of food "roughage" for the maintenance of satisfactory intestinal motility is widely appreciated. It is quite generally recognized that wheat bran contains a relatively large amount of indigestible material, notably cellulose. Knowledge of these facts has resulted in a considerable use by human beings of bran as a source of food roughage. Extreme views regarding such use have been expressed in the literature. Kellogg[1] is one of those who attribute numerous ills to constipation and therefore advocate the ingestion of large amounts of various sources of "indigestible residue," including bran, as a corrective and preventive measure. Alvarez[2] has challenged this view, and, as evidence for his position, has cited the results of a questionnaire circulated among physicians concerning the therapeutic use of bran. It may be questioned whether such a method of approach to the problem as Alvarez has employed is adequate or even suited. A more logical plan seems to be to test bran for laxative power on human beings subsisting on suitable, carefully controlled diets. The

3. Tainter, M. L., and Van Deventer, William: The Antiedemic Actions of Calcium in Experimental Irritative Edemas, J. A. M. A. **94**: 546 (Feb. 22) 1930.
4. Ramirez, M. A.: The Value of Calcium in Asthma, Hay Fever and Urticaria, J. Allergy **1**: 283 (March) 1930.
5. Criep, L. H., and McElroy, W. S.: Atopy: Blood Calcium and Gastric Analysis, Arch. Int. Med. **42**: 865 (Dec.) 1928.
6. Cohen, M. B., and Rudolph J. A.: A Clinical Study of the Use of Calcium in Controlled Cases of Allergy, J. Allergy **1**: 34 (Nov.) 1930.

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Wheat bran, extracted twenty hours at room temperature with 0.2 per cent hydrochloric acid to remove phytin and other substances, is called washed bran in this paper.

1. Kellogg, J. H.: The New Dietetics, Battle Creek, Mich., Modern Medicine Publishing Company, 1921.
2. Alvarez, W. C.: Minnesota Med. **14**: 296 (April) 1931.

present paper is a report of such experiments conducted on healthy men.

Early recognition of the laxative value of bran in cattle, coupled with the knowledge that bran contains phytin, a phosphorus-yielding organic complex easily removed by washing with weak acid, led Jordan, Patten and Hart [3] to try the experiment of feeding to cattle a bran that had been treated with weak acid to remove the phytin; constipation definitely resulted and was relieved by the administration of the natural bran. The conclusion was drawn that the laxative power of bran is due predominantly to the phytin which it contains. Tests of salts of phytin performed on other species of animals [4] failed to confirm this. Williams [5] experimented on the dog and observed no difference between whole bran and the phytin-extracted product with respect to laxative power. It is possible that the observations of Jordan, Patten and Hart on cattle are in some way related to the fact that this species possesses that unique organ, the ruminant stomach. Then it should be borne in mind that treatment of bran with weak acid results in the extraction not only of phytin but also of inorganic phosphates and other substances, and that the absence of these other materials rather than of the phytin may have been responsible for the effects observed in the ruminant. The results suggest that, when an endeavor is made to evaluate bran as a laxative for man, it is pertinent to inquire whether the phytin which it contains contributes in any way to enhance the effect due to the indigestible cellulose also present. When this question is answered, it will be possible to say whether bran is to be regarded as having a somewhat unique value as a laxative or whether it is to be classified among foods simply on the basis of its content of indigestible residue. The experiments reported in this paper represent attempts to answer this question as it relates to the human species.

CRITERIA OF LAXATIVE ACTION

In the study of laxation,[6] one is confronted at the outset by difficulty in the selection of suitable criteria of laxative action. Among the indexes that suggest themselves are: (1) subjective impressions of the persons concerning the complete and satisfactory character of elimination; (2) the amount of intestinal contents evacuated under the test conditions; (3) the water content of the stools, a large amount of water being indicative of only a brief stay of fecal material in the colon with consequent failure of absorption of water, and a low water content pointing to the opposite condition; (4) the time of passage of material through the alimentary tract; (5) the number of defecations in a unit of time, or laxation rate, and (6) the amount of indigestible substance, fiber, for example, present in the stool and the relation of this to the quantity ingested. In presenting the results of this investigation, each of these possible criteria will be considered and discussed.

The number of defecations in a unit of time—laxation rate—would seem to be the most logical objective indication of the extent to which laxation is taking place. The observations of Williams [5] on dogs indicate that this assumption is not without foundation. In the case of human beings, however, the mere record of the number of defecations may prove inadequate, because of the effect of habit or "conditioning" of the defecation reflex as the result of a highly organized social life.

Studies of the defecation reflex in animals indicate that it involves primarily a purely intrinsic nervous mechanism, which, however, may be influenced by nerve impulses from the brain. As an illustration of this, one may cite the case of Goltz's [7] dog in which the spinal cord had been severed in the lower thoracic region; this animal, nevertheless, performed the defecation act in normal fashion. In later experiments by Goltz, in which the entire spinal cord was removed except in the neck and upper thoracic region, the animal, after recovery from the operation, had a normal movement once or twice a day, indicating that the rectum and lower bowels acted by virtue of their own intrinsic mechanism. What are the stimuli capable of arousing the defecation reflex in such an animal? At the present time they are little understood. It is conceivable that one or more of the following factors may play a rôle: (1) the amount or bulk of the material present in the lower bowel ready for elimination; (2) the actual pressure or distention that this mass may exert on the colon or rectal wall; (3) the area of intestinal wall that it may stimulate by contact, and (4) chemical stimulation of the colonic wall by substances in the fecal mass. Just how these factors may be studied and measured is by no means clear. In the case of human beings, who have developed the habit of defecating at fairly definite times, the execution of the defecation reflex obviously does not depend solely on the influence of such factors.

GENERAL PLAN OF EXPERIMENT

The plan adopted for this investigation consisted in having healthy men subsist first of all on a carefully selected basal ration, the laxative effect of which was known by having been recorded during a preliminary period of observation, and then on the same ration supplemented by a selected test amount of whole or washed bran. The comparison of these bran products was made on a fiber-equivalent basis.

In the preliminary studies a basal diet having what might be regarded as an average or normal fiber content was used; under such dietary conditions the laxative power of bran was not readily demonstrable. Another type of experimental ration was then devised and employed; namely, one the continued use of which was associated with a mild degree of constipation, as represented by defecation once a day. Finally, tests of the bran products were made by means of a diet that was markedly constipating in its effects. Three illustrative diets representative of these different experimental conditions and ingested by the same person are shown in table 1.

The foods were selected in such a way as to give a combination both qualitatively and quantitatively suitable for the respective persons. For example, orange juice was provided in order to insure an adequate supply of the heat-labile antiscorbutic vitamin.

3. Jordan, W. H.; Patten, E. B., and Hart, A. J.: Am. J. Physiol. **16**: 268, 1906.

4. Mendel, L. B., and Underhill, F. P.: Am. J. Physiol. **17**: 75, 1906.

5. Williams, G. A.: Am. J. Physiol. **83**: 1 (Dec.) 1927.

6. In the writing of this paper the question arose as to the correct use of the word laxation. Investigation revealed that this word is not listed in the two standard medical dictionaries that were consulted; nor was it found in the Winston "Simplified Dictionary." In Webster's New International Dictionary (page 1223) laxation is defined as "the act of loosening, slacking or relaxing, or state of being loosened, slackened or relaxed." The definition given in the Funk and Wagnalls New Standard Dictionary of the English Language is essentially the same. It will be noticed in the definition cited that there is no specific reference to the alimentary tract. In this paper the writers have decided to use the word laxation to signify the act of loosening the bowels as well as the state or condition or degree of loosening characteristic of the bowels.

7. Goltz, Friedrich: Arch. f. d. g. Physiol. **8**: 160, 1874. Goltz, Friedrich; and Ewald, J. R.: Ibid. **63**: 362, 1896.

When the experimental diet had been selected in each case, a capsule containing either charcoal or carmine was taken by the person in order to differentiate the stool formed from the residue of the meal ingested at the time the "marker" was taken. This technic for identifying the stools was used at the beginning of each experimental period. Each stool was weighed immediately on passage and then allowed to dry in a current of warm air. All the specimens evacuated during a given experimental period were then combined and the entire mass was weighed, ground to a degree of fineness suitable for analytic work, and then analyzed for residual moisture, fiber and mineral substances. In each period not only the number of laxations was recorded but also the time of passage and the subjective sensations of each individual with respect to difficulty of bowel movement, satisfactory evacuation, and the like.

TABLE 1.—*Representative Diets Used in These Investigations*

Part 1 Preliminary Study Two Movements per Day "Condition Excellent"		Part 2 Mild Constipation One Movement per Day "Unsatisfactory"		Part 3 Marked Constipation Less Than Once a Day "Very Unsatisfactory"	
Dietary Ingredient	Amount Daily, Gm.	Dietary Ingredient	Amount Daily, Gm.	Dietary Ingredient	Amount Daily, Gm.
Almonds	135	Bacon	130	Bacon	130
Soda crackers	75	Hamburger steak	150	Hamburger steak	150
Apple butter	70	Soda crackers	36	Soda crackers	36
Cheese	100	Bread	190	Bread	190
Lettuce	100	Butter	45	Butter	45
Mayonnaise dressing	15	Cheese	60	Cheese	60
Banana	600	Jelly	70	Jelly	90
		Banana	350	Banana	200
		Potato	220		
		Ice cream	100	Ice cream	100
		Catsup	25	Catsup	25
		Cod liver oil	4	Cod liver oil	4
	Cc.		Cc.		Cc.
Milk	500	Milk	500	Milk	500
		Tomato juice	100		
		Orange juice, strained	70	Orange juice, strained	70
Water	1,500	Water	2,000	Water	2,000
Cocoa*	250	Cocoa*	250	Cocoa*	250
Fiber content, 6.3 Gm.		Fiber content, 5.25 Gm.		Fiber content, 3.1 Gm.	

* Cocoa, 6 Gm.; sugar, 10 Gm.; milk, 200 cc., and water, 50 cc.

In general, foods poor in fiber content were selected. Each food was analyzed for crude fiber,[8] mineral materials and moisture content, thus making it possible to estimate for each person the total intake, particularly of fiber and inorganic substances, for comparison with the amounts evacuated from the intestinal canal.

It is possible that the degree of hydration of the individual exerts some influence on laxation. Therefore, each person measured the volume of fluid taken daily during the preliminary period, when the exact details of the basal ration were being determined, and, on the basis of these observed quantities, selected that volume which should be taken daily, and thereafter drank that amount regularly. In this way each person conformed to his own desirable standard with respect to fluid intake.

RESULTS

PART 1.—*Preliminary Experiments.*—Five healthy men served as subjects for the initial feeding trials. The experimental periods were four days long. Whole bran and two bran products were tested. During these preliminary periods, it will be recalled, the basal diet contained what was regarded as an average or normal content of fiber (table 1, part 1).

The following observations were made: On the basis of subjective impressions, four of the five persons on experiment noted no essential difference between the control and the experimental period. It was found that the laxation rates—number of defecations per day—were consistently high, the average for all periods being twice a day. When the data for the amount of material eliminated per day were studied, however, it was found that in thirteen out of fifteen instances the addition to the basal diet of bran or either of the test bran products resulted in an increased elimination of fecal material. In a few cases the increase was large.

These results raised several important questions: Was the failure to obtain a subjective impression of laxative effect related to the high laxation rate which prevailed when the individuals subsisted on the basal ration alone? Was it not likely that the person failed to notice the moderate increase in laxation, which occurred, as shown by the data for amount of material eliminated, because the rate was already high enough to give the feeling that laxation was satisfactory? This suggested that the different criteria of laxative action discussed in a preceding section may differ in their applicability to various conditions. There was also the possibility that the experimental periods in this preliminary study were too short; that four days is not enough to avoid a hang-over effect of a given period on the succeeding one.

Another point should be mentioned. Let it be assumed that the laxative action of the diet is due primarily, if not solely, to its content of indigestible material, of which fiber may be taken as the representative. Suppose that the amount of fiber already present in the diet and exerting a laxative action is great enough to bring about a high laxation rate. Under these conditions, then, it is quite possible that the quantity of additional fiber required in order to bring about a significant increase in the rate of laxation may be much greater relatively than that needed when the defecation rate is low enough to be interpreted subjectively as constipation. In other words, the basal diet used in these preliminary trials may have had too much fiber in it to allow satisfactory subjective demonstration of increased laxation due to ingestion of bran or other test material. This explanation of the preliminary observations is supported by the observations of Thorup and Carlson,[9] who investigated the influence of yeast on the alimentary rate. In their study the greatest changes in the intestinal rate resulting from ingestion of yeast occurred in those individuals who exhibited, as their "normal," rates below the average.

In the light of these considerations it was deemed advisable to repeat the study of the laxative action of bran by making observations on individuals subsisting on a basal diet definitely constipating in its effect and by extending the observations over much longer periods than were employed in the preliminary trials. Some difficulty arose in deciding not only as to the proper duration of the periods but also as to how severe the constipation induced by the experimental ration should be. It was decided to experiment with a basal diet which allowed a defecation rate of once a day and which was interpreted subjectively as "a rather unsatisfactory condition" or "mild constipation." It was believed that such a condition could be endured without injury by the persons acting as the subjects for the investigation for experimental periods of fourteen

8. Official methods of the Association of Official Agricultural Chemists, 1925, were used.

9. Thorup, D. W., and Carlson, A. J.: Am. J. Physiol. **84**: 90 (Feb.) 1928.

days' duration. The experiments carried out in accordance with this plan are described in part 2.

PART 2.—*A Comparative Study of the Laxative Effects of Whole Bran and Washed Bran in Healthy Men Exhibiting a Mild Degree of Constipation.*—Experimental Details: Five healthy men served as the subjects for these experiments. The experimental periods were of fourteen days' duration in the case of four individuals and of ten days' for the fifth person.

An effort was made to select a basal diet distinctly lower in fiber content than that used in the preliminary studies. Because the total time of subsistence on the basal ration with and without supplement of test product was planned to range from at least four to eight weeks, each person experimented by ingesting varying amounts of the selected foods over periods of from ten days to two weeks in an endeavor to find a daily ration that he would be able to eat for a long period without subjective or other difficulty and which at the same time would meet the requirements of the research. When the experimental diet had been selected in each case, the "marker" of charcoal or carmine was taken to differentiate the stool formed from the residue of the meal ingested at that time, and the test period was formally begun.

The amount of fiber present in the new diet was less than that contained in the ration used in the preliminary study by about 1 Gm. The amount of water taken daily was carefully standardized in the manner previously described. In comparing washed bran with the natural product, fiber-equivalent quantities were used.

Subjective Impressions as a Criterion of Laxation: In every case the individuals reported that while on the basal diet only they felt that the bowels were unmistakably constipated although defecating once every day. The constipation was not of severe degree but was sufficient to be noticed. Frequently the evacuations were not satisfactory; there was the impression that emptying was incomplete. The urge to defecate, when it did occur, was not as pronounced as formerly. In contrast to this it was noticed that, when either the whole or the washed bran was taken, the urge to defecate was unmistakable at practically all times and could not be disregarded. Moreover, there was the feeling that the evacuation was fairly complete. The stools were more bulky. It was obvious that the ingestion of the whole bran or the washed product resulted in the production of a larger stool. So far as the subjective sensations were concerned, there seemed to be little or no difference in the physiologic effects of the two products tested.

TABLE 2.—*Number of Defecations in Fourteen-Day Periods When the Basal Diet is "Borderline" or Mildly Constipating in its Effects* *

Person	Periods 1 Basal Diet	2 Basal Diet Plus Whole Bran	3 Basal Diet	4 Basal Diet Plus Washed Bran
W. E. A.	14	15	15	17
F. C. B.	14	16	14	16
M. L. P.	14	15	12	15
S. A. P.	15	21	14	18
A. B.†	10	11	14	13

* From 1 to 1½ ounces of whole bran daily and the fiber equivalents of washed bran were the quantities used in test periods 2 and 4, respectively.
† Ten day periods.

Laxation Rate as a Criterion of Laxative Effects: Table 2 presents the data concerning the laxation rates that prevailed in the persons on these experiments. It will be observed that, after adding either 1 ounce of whole bran or its fiber equivalent of washed bran to the diet, only one person (S. A. P.) showed a pronounced increase in laxation rate over that of the basal periods. In this case the whole bran proved to be slightly superior to the washed product, if one chooses to regard the difference between eighteen and twenty-one defecations occurring in as long a period as fourteen days as a significant one. This is questionable. In the other cases there was only a slightly increased laxation rate in the test periods as compared with the controls. The subjective impressions of the persons, nevertheless, support the view that these test substances did exert laxative action.

TABLE 3.—*Amount of Intestinal Contents Evacuated per Day and per Defecation When the Basal Diet is "Borderline" or Mildly Constipating in Its Effects* *

Person	Average Weight of Intestinal Contents Eliminated per Day in Period† 1 Gm.	2 Gm.	3 Gm.	4 Gm.	Average Weight of Intestinal Contents Eliminated at Each Defecation in Period† 1 Gm.	2 Gm.	3 Gm.	4 Gm.
W. E. A.	134	155	104	149	134	144	97	123
F. C. B.	100	205	129	220	100	169	129	193
M. L. P.	138	218	130	163	138	193	151	152
S. A. P.	101	200	97	154	94	127	91	119
A. B.	107	189	101	171	107	157	72	132

* The daily allowance of from 1 to 1½ ounces of whole or washed bran was distributed over two meals.
† Periods 1 and 3, basal diet only; period 2, basal diet plus whole bran; period 4, basal diet plus washed bran.

Amount of Intestinal Contents Evacuated: The ingestion of either whole or washed bran resulted in daily evacuation of an increased amount of material. The data are presented in table 3. In view of the fact that S. A. P. showed an increased laxation rate when given bran (table 2), it became of interest to determine the average amount of material eliminated at each defecation. Data relative thereto have been incorporated in table 3.

In the case of S. A. P. (table 3) the amounts of material eliminated per day were approximately the same as those evacuated by the other persons. However, S. A. P., unlike the rest of the group, evidently could not retain such large amounts of fecal matter in the lower bowel without undue stimulation of the defecation reflex. The recent observations of Hines, Lueth and Ivy [10] on the contractions of the rectum and their relation to the defecation urge indicate that human beings show some variation with respect to their sensitivity to pressure within the rectum and the contractions of this organ. The increase in the defecation rate in the case of S. A. P., associated with average elimination of a relatively smaller stool, probably finds its explanation in such observations as those of Hines, Lueth and Ivy just cited.

In view of these positive observations with respect to the subjective criteria of laxative action and the increased amount of material eliminated, but negative result with respect to effect on laxation rate, further experiments with individuals exhibiting a constipation even more severe in degree were deemed advisable. After completing the experiments just reported,

10. Hines, L. E.; Lueth, H. C., and Ivy, A. C.: Motility of the Rectum in Normal and in Constipated Subjects, Arch. Int. Med. **44**: 147 (July) 1929.

W. E. A. experimented further in an endeavor, first, to determine how best to alter the basal ration so as to produce a more constipated condition in himself and, secondly, to test the effect of ingestion of bran on the condition thus produced. The basal diet used previously (part 1) is shown in table 1. As a result of the elimination of potatoes from this ration and the reduction of the daily intake of bananas from 350 Gm. to 200 Gm., marked intestinal stasis developed. When this had prevailed for eight days, 30 Gm. of whole bran was eaten daily over a period of nine days. A definite increase in laxation rate resulted. It was not possible for W. E. A. to continue further on this experiment and determine the effect of washed bran. However, these observations emphasized the importance of repeating the experiments described under part 2 but using a basal diet more constipating in its effects. These additional studies are described in part 3.

TABLE 4.—*Weight of Intestinal Contents Eliminated When the Basal Diet was Markedly Constipating in Its Effects*

Person	Average per Day in Period*				Average per Defecation in Period*			
	1 Gm.	2 Gm.	3 Gm.	4 Gm.	1 Gm.	2 Gm.	3 Gm.	4 Gm.
W. E. A.	82	168	84	182	114	147	98	159
M. L. P.	106	187	105	166	124	109	105	89
R. L. R.	107	252	87	235	107	110	101	117
R. H. W.	79	149	95	158	111	116	119	111
Average	94	189	93	185	114	121	107	119
Average with "borderline" diet: part 2 experiments	116	193	112	171	114	158	108	144

* Periods 1 and 3, basal diet only; period 2, basal diet plus whole bran; period 4, basal diet plus washed bran.

PART 3.—*A Comparative Study of the Laxative Effects of Whole Bran and Washed Bran in Healthy Men Exhibiting a Marked Degree of Constipation.*—Experimental Details: The observations here reported were made on four healthy men. The general plan of experimentation was the same as that followed in the experiments described in part 2. Two of the individuals (W. E. A. and M. L. P.) had served as subjects for the previous experiments. Subsistence on the new rations resulted in marked constipation in their cases. Of the two remaining persons, one showed pronounced intestinal stasis; the other (R. L. R.) defecated once a day but felt distinctly uncomfortable while exhibiting this laxation rate and considered himself a good subject for the experiment. It is an interesting fact that R. L. R.'s rate of once a day, like that of the persons on the experiments described in part 2, was also associated with a daily fiber intake of approximately 50 mg. per kilogram of body weight. This relationship and its significance is discussed in a later section of this paper.

Subjective Impressions as a Criterion of Laxation: The subjective impressions recorded during the periods of subsistence on the basal diet alone were unanimous in emphasizing the difficulty of bowel movement and, frequently, the feeling that evacuation was incomplete. In contrast to this are the records for the bran periods indicating that defecations now were easy to perform, satisfying in character, and accompanied by the impression that all dejecta had been eliminated. No difference could be noticed in the effect obtained with whole bran as contrasted with that for the washed product.

Amount of Intestinal Contents Evacuated: As was the case in the previous experiments described in parts 1 and 2, ingestion of either whole or washed bran resulted in daily evacuation of an increased amount of material. The data presented in table 4 show not only the average weight of dejecta eliminated by each individual per day but also the average amount evacuated at each defecation. Comparison of these averages with those obtained in the experiments with a "borderline" or "mildly constipating" diet (part 2) is not without interest. In order to facilitate such a comparison, these average data from table 3 are included in table 4.

The average amounts of dejecta per day yielded by the persons when on the more constipating basal diet of the present experiments (periods 1 and 3, table 4) are lower than those for the corresponding basal periods of the study described in part 2, in which a "mildly constipating" basal ration was used. We are inclined to believe that the differences, although not large, are significant; but we hesitate to stress this point. When the more constipating diet was used, the amounts eliminated per defecation regardless of diet and period showed a rather remarkable agreement suggesting that the urge to defecate is dependent to an appreciable extent on the presence in the lower bowel of what might perhaps be spoken of as a "threshold mass."

The data given in table 4 confirm the conclusion indicated by the other criteria of laxation discussed, that there is no difference in the laxative values of whole and of washed bran.

Laxation Rate as a Criterion of Laxative Action: Table 5 presents the data concerning the number of times the individuals defecated in the various periods. As not all of the periods were of seven days' duration, comparison is facilitated by calculation of the rates of laxation—the number of movements per day; these data are also incorporated in table 5.

The constipating effect of the basal ration used in this study is made manifest if one compares the rates of laxation prevailing in the basal periods 1 and 3 of table 5 with those for similar periods in table 2, in which the rates yielded by the basal diet were approximately once a day. Many of the rates shown in table 5 were less than one, indicating that the persons concerned frequently passed a day without having a bowel movement.

TABLE 5.—*The Number and Rate of Defecations Observed When the Basal Diet was Markedly Constipating in Its Effects*

Person	Number in Seven Day Periods*				Rate per Day in Periods*			
	1	2	3	4	1	2	3	4
W. E. A.	5	8	6	8	0.7	1.1	0.9	1.1
M. L. P.	6	12	10†	13	0.9	1.7	1.0	2.0
R. L. R.	7	16	6	14	1.0	2.4	1.0	2.1
R. H. W.	5	9	8†	10	0.7	1.3	0.8	1.6

* Periods 1 and 3, basal diet only; period 2, basal diet plus whole bran; period 4, basal diet plus washed bran.

† Ten day period instead of seven days because of hang-over effect of the previous period.

In contrast to the results obtained in the studies described in parts 1 and 2, the objective data presented in table 5 abundantly confirm the subjective impressions indicating that both whole bran and washed bran possess demonstrable laxative power when tested under these conditions. Comparison of periods 2 and 4—"whole bran" periods, respectively—with the basal periods 1 and 3 brings out this fact clearly and supports

the conclusion that there is no appreciable difference in the laxative values of washed bran and the natural product. This is a confirmation of the conclusion reached by consideration of the subjective impressions recorded. Evidently, then, the use of a more constipating diet for this study has been justified. The entire investigation described thus far strongly suggests that the technic often employed by students of laxation, namely, mere administration of the test product to individuals subsisting on various uncontrolled diets, and recording of a positive or negative effect on laxation, is an inadequate means of approach to the problem. A substance evidently may exhibit considerable laxative power when tested on a definitely constipated individual but yield a negative response when administered to a person whose condition in this respect is "borderline" or "normal."

TABLE 6.—*Summary of Average Intervals Between Defecations Observed When the Basal Diet was Markedly Constipating in Its Effects*

Person	Period 1 Basal Diet Only, Hours	Period 2 Basal Diet Plus Whole Bran, Hours	Period 3 Basal Diet Only, Hours	Period 4 Basal Diet Plus Washed Bran, Hours
W. E. A.	39	14	28	24
M. L. P.	29	14	25	12
R. L. R.	27	12	21	12
R. H. W.	36	20	30	17
Average	34	15	26	16

Time of Passage of Material Through the Alimentary Tract as a Criterion of Laxation: The duration of the interval between defecations will stand in inverse relation to the state of laxation occurring. The interval might be as short as that characteristic of a severe diarrhea; on the other hand it might be as long as twelve months, as in the famous case of constipation described by Geib and Jones.[11] In table 6 are presented the data concerning the duration of the interval between defecations obtained in the present experiments. They indicate, as do the subjective impressions and the objective data pertaining to rates of laxation and amount of material eliminated, that there is no difference in the laxative power of whole bran and washed bran, when these products are fed in fiber-equivalent amounts to constipated individuals.

It will be noticed in table 6 that the average interval in basal period 3 was shorter than that for period 1. The individuals on the experiment all gained the impression that in period 3 there was a hang-over effect from period 2.

Water Content of the Stool as a Criterion of Laxation: The reasons for believing that the water content of the stool may serve as an index of laxation have already been presented and need not be repeated here. In discussing the data obtained from this study bearing on this question it is pertinent to repeat that the influence of water intake on laxation was minimized as far as possible in the present study. Each person drank a constant, selected and suitable volume of water daily.

The percentage of water present in the stools of the persons in these experiments was on the whole quite constant. Data obtained from each series of feeding trials are presented in table 7. In studying these figures it should be borne in mind that they are the result of determinations for moisture content of the total combined stools for the period. When the data in table 7 were studied, and the tendency toward formation of a stool of constant water content was recognized, there was considered the possibility that the water content of the stool varies appreciably from day to day, and that data of the sort presented in table 7, being averages, really obscure such daily differences. This possibility received support from the observation that certain stools, selected as representative of a constipated condition because of difficulty in passing, seemed on gross inspection to be drier than other specimens and actually proved on analysis to have an appreciably lower content of moisture. It seemed worth while, therefore, to study the water content of a large number of individual freshly passed dejecta. An opportunity for doing this was presented when another series of feeding trials was carried out in which two bran products were tested for laxative potency on eight normal men who subsisted on basal diets that were markedly constipating in their effects, being essentially of the type used in the experiments of part 3. Each person submitted for moisture determination specimens which proved to be difficult to pass and which were interpreted as evidence of definite constipation. The results of these determinations are given in table 8.

It will be noticed in table 8 that there were several specimens in which the moisture content was quite definitely below the averages given in table 7. The grand average in table 8 is 66 per cent, as compared with 72 per cent in table 7. The specimens regarded as representative of marked constipation, therefore, were in fact slightly more dehydrated. The differences, however, are small and their significance questionable. The conclusion that seems to be justified by these observations is that the water content of the stools is of little value as a criterion of laxation.

TABLE 7.—*Water Content of the Stool as a Criterion of Laxation*

Prevailing Condition of Laxation on Basal Diet	Person	Period* 1 Basal Only, per Cent	2 Per Cent	3 Basal Only, per Cent	4 Per Cent	5 Basal Only, per Cent	6 Per Cent	Average, per Cent
Preliminary study: "two movements per day"	C. E. T.	74	76	65	79	72	75	74
	C. H. W.	72	78	74	74	70	60	71
	F. B. W.	63	65	66	61	62	77	66
	F. C. B.	71	69	71	70	69	74	71
	W. E. A.	69	72	68	71	62	63	68
Average		70	72	69	71	67	70	70

Prevailing Condition of Laxation on Basal Diet	Person	Period† 1	2	3	4	Average, per Cent
"Borderline": mild constipation, "one movement per day"	W. E. A.	76	74	72	72	74
	F. C. B.	Lost	80	81	82	81
	M. L. P.	78	80	79	78	79
	S. A. P.	77	80	77	81	78
	A. B.	76	79	74	74	76
Average		77	79	76	77	78
Marked constipation	W. E. A.	68	73	66	75	73
	M. L. P.	84	76	79	77	79
	R. L. R.	84	79	77	79	80
	R. H. W.	44	66	78	72	65
Average		70	74	76	76	74
Grand average of basal periods, per cent						72
Extreme values, per cent						44-84
Grand average of all periods regardless of diet, per cent						73
Extreme values, per cent						44-84

* For description of periods see table 2.
† For description of periods see table 4.

11. Geib, Daniel; and Jones, J. D.: Unprecedented Case of Constipation, J. A. M. A. **38**: 1304 (May 17) 1902.

Fiber Content of the Diet in Relation to Laxation: The importance of giving attention to the amount of indigestible material present in the diet, when studying the problem of laxation, is well known. Fiber, or cellulose, is perhaps the most common of the indigestible substances present in the foods of man and therefore assumes considerable importance in a study such as is described in this paper. For this reason the comparison of whole bran with the washed product was made on a fiber-equivalent basis. As these test products were found to have the same laxative potency, it may

TABLE 8.—*Water Content of Freshly Passed Stools Representative of Marked Constipation*

Person	Individual Determinations, per Cent	Average For Person, per Cent
W. E. A.	52, 48	50
M. L. P.	64	64
P. A. B.	89, 68	79
T. L. B.	63, 70, 71	68
P. S.	65, 66	66
E. W. S.	67, 70	69
C. E. T.	68, 69, 70	69
F. B. W.	53, 66	60
Grand average	66 per cent	

be concluded that the laxative action of bran is due predominantly to the fiber present and not to phytin or other bran constituents that are readily extracted by treatment with weak acid. This confirms the work of Williams,[5] carried out on dogs, and of Falcon-Lesses,[12] performed on rats. Therefore the statement often made in the literature that the laxative action of bran is due chiefly to the phytin which it contains is erroneous.

Alimentary Disappearance of Fiber: In the investigation here reported, several interesting observations were made bearing on the rôle of fiber or indigestible material in laxation. In stating that the laxative value of an edible substance is due primarily to the fiber it contains, one must guard against creating the impression that the so-called fiber is totally indigestible and remains entirely intact in its passage through the alimentary tract of man. If the amounts of fiber ingested and subsequently excreted by way of the stools are known, it becomes possible to determine whether the fiber that is eaten has passed through the alimentary canal unchanged, and also to what extent any increase in bulk of the intestinal excreta is due to the additional fiber ingested. Earlier studies of this nature (reviewed by Schmidt and Strasburger[13]), have shown that there is a variable utilization of the cellulose contained in different vegetables. For example, in some experiments the fiber from cabbage almost completely disappeared in contrast to about 47 per cent of the fiber of lentils.[14] The data obtained in the present investigation and presented in table 9 likewise indicate that appreciable amounts of ingested fiber disappear in the course of alimentary passage through man.

Calculations were also made to determine the extent to which the fiber of the whole bran and the washed bran disappeared following ingestion. This was done by comparing the increments of food and fecal fiber in (*a*) the whole bran period 2 over basal period 1, (*b*) the whole bran period 2 over the basal period 3, and (*c*) the washed bran period 4 over the basal period 3. Such calculations can be only approximate. From the results of the calculations presented in table 10 it is evident that more of the fiber contained in both the whole and the washed bran passes through the alimentary tract unchanged than is the case with the fiber contained in the foods comprising the basal diet. This is a confirmation of work reported in the literature. Reference has already been made to the observations of Lohrisch, showing that a relatively large amount of the fiber of cabbage disappears during alimentary passage as compared with the fiber of lentils. Other work bearing more directly on the question of the utilization of bran is that of Rubner,[15] who made a study in men of the extent to which the cereal brans disappear when fed in the form of coarse black bread. Examination of his data[16] reveals that about 56 per cent of the bran disappeared. This figure is considerably greater than the averages presented in our table 10. Perhaps the difference is related to the fact that in Rubner's experiments almost 2 ounces of bran was ingested daily, whereas in the present study the daily intake was from 1 to 1½ ounces. Differences in the milling processes by which the brans were prepared also might account in part for these observed differences.

Modification of the Demonstrable Laxative Value of Bran by the Amount of Fiber Already Present in the Diet: The tests of whole and of washed bran on individuals exhibiting marked constipation resulted in the demonstration that these substances possess definite laxative power. In the earlier studies described, the amount of fiber already present in the basal diet, on which the bran product was superimposed, was great enough to bring about a laxation rate of at least once a day, and the addition to this of the amount contained in an ounce of bran was not sufficient to improve laxation except as measured by subjective sensations and the amount of material evacuated. The ratio of bran or other test-substance fiber to the total fiber in the diet seems to be of importance, therefore, if the laxative power of the test product is to be demonstrated beyond question. In table 11 are given, for purposes of comparison, the values of this ratio for the preliminary feeding trials, those with a "borderline" or "mildly constipating" diet (part 2), and those obtained when the individuals were markedly constipated (part 3). From table 11 it appears that, in order to demonstrate clearly in normal men the laxative power of bran (or other test source of fiber), the ratio of fiber in the test material to the total fiber in the diet must

TABLE 9.—*Amount of Ingested Fiber that Disappears on Passage Through the Alimentary Tract of Healthy Men*

Person	Period 1 Basal Diet Only, per Cent	Period 2 Basal Diet Plus Whole Bran, per Cent	Period 3 Basal Diet Only, per Cent	Period 4 Basal Diet Plus Washed Bran, per Cent
W. E. A.	69	57	65	46
W. E. A.*	60	44	58	52
M. L. P.	36	48	76	56
M. L. P.*	73	42	62	49
S. A. P.	73	56	73	56
A. B.	24	34	42	39
R. L. R.	80	30	83	53
R. H. W.	61	37	57	55
Average	60	44	65	51

* This person served as a subject in two series of experiments.

12. Falcon-Lesses, Mark: J. Nutrition **2**: 295 (Jan.) 1930.
13. Schmidt, E. A., and Strasburger, Julius: Die Fäzes des Menschen, ed. 3, Berlin, August Hirschwald, 1910, pp. 211-216.
14. Lohrisch, H. R.: Ztschr. f. physiol. Chem. **47**: 237, 1906.
15. Rubner, Max: Ztschr. f. Biol. **19**: 67, 1883.
16. In table on page 67 of Rubner's paper.

approximate the value 0.6. It would be interesting to perform similar experiments with nonfiber sources of roughage in order to determine whether this finding applies to indigestible residues in general.

The Relation Between Ingested Fiber and the Rate of Laxation: The observations presented in table 11 suggested that a detailed examination of the data for ingested fiber in relation to the rate of laxation might

TABLE 10.—*Amount of the Ingested Fiber of Whole Bran and Washed Bran That Disappears on Passage Through the Alimentary Tract of Healthy Men*

	Whole Bran: Periods Used in Calculations			Washed Bran: Periods Used in Calculations		
Person	2 and 1, per Cent	2 and 3, per Cent	Average, per Cent	4 and 3, per Cent	4 and 1, per Cent	Average, per Cent
W. E. A.	42	47	45	22	..	22
W. E. A.*	32	34	33	53	45	49
M. L. P.	61	22	41	40	..	40
M. L. P.*	20	27	24	41	33	37
F. B.	..	25	25	22	..	22
S. A. P.	35	36	36	37	..	37
R. L. R.	—30†	—30†	—30†	28	30	29
R. H. W.	22	25	24	54	52	53
Average‡	35	31	33	37	40	36

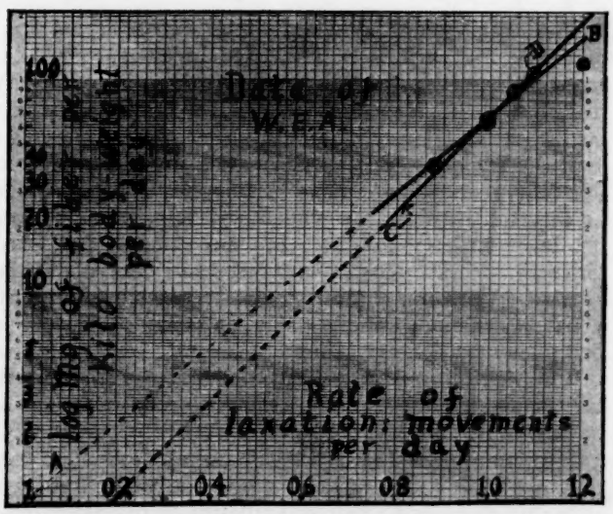
* This person served as a subject in two series of experiments.
† The output was 30 per cent greater than the intake. This might be explained as a hang-over effect from the previous period.
‡ The values for R. L. R. designated by † were omitted when these averages were calculated.

yield significant and interesting results. Fifty-six instances were available for study in which the fiber intake per kilogram of body weight per day and the number of bowel movements per day were known. W. E. A. served as the subject in every series of feeding trials. Therefore, in his particular case it was possible to plot five separate points for laxation rates, ranging from 0.8 to 1.2 movements per day and corresponding fiber intakes from 38 to 112 mg. per kilogram per day. These data, when plotted on coordinate paper, suggested a logarithmic relationship between these two variables; another plot on arith-log paper gave the surprising relationship presented in the accompanying chart. Line *AB* represents the best straight line plot for all the data that run through the intersection of the axes; *CD* is the line running through all but one of the plotted points.

TABLE 11.—*Relation of the Demonstrable Laxative Power of Bran to the Total Amount of Fiber in the Diet*

Prevailing Condition of Laxation on the Basal Diet	Movements per Day When on the Basal Diet Average	Ratio of Test Substance Fiber to Total Fiber Ingested	Is a Laxative Potency Demonstrated?
Part 1: preliminary study; "two movements per day"	2.05	0.34	No
Part 2: mild constipation; "once a day"	1.00	0.44	Subjective criteria: yes; objective criteria: ?
Part 3: marked constipation; "less than once a day"	0.88	0.59	Yes

As a conservative interpretation of the chart, it might be stated that the range of values for the logarithm of fiber intake is not great, running from 1.58 (log of 38) to 2.08 (log of 112), and that, therefore, the relationship may be of a first approximation order only, and not of very great significance. On the other hand, it is of interest to point out that a projection of line *CD* cuts the *x* axis at a value of about 0.2; in other words, if this relationship is significant within the range of values covered by plot *CD* and holds for extrapolated points representing lower values of the respective variables, and the fiber intake per day is reduced to zero, a laxation rate of 0.2 per day, or once in five days, is obtained. Approximately this value was actually obtained in a separate study on dogs. These animals were fed an artificial diet supplemented by measured amounts of various sources of indigestible material. Subsistence on the basal diet devoid of roughage resulted in defecation about once every four days. In view of this observation we are inclined to believe that the relationship presented in the chart is more significant than the conservative interpretation just given would indicate. As further evidence in support of this view we may cite the finding that the fifty-six cases secured in this study, in which values for the fiber intake per kilogram per day and laxation rate were obtained, conformed to this relationship. All cases in which the daily fiber intake was less than 50 mg. per kilogram exhibited laxation rates with values of less than once a day; intakes of fiber ranging from 50 to 63 mg. per kilogram were associated with defecations



Data of W. E. A.

once a day, interpreted subjectively as "mild constipation"; when the intakes of fiber were 70 mg. and over, laxation was regarded as satisfactory by subjective criteria in every instance, some persons, however, requiring a daily fiber intake of from 90 to 100 mg. per kilogram in order to secure excellent laxation, as judged by all criteria, both subjective and objective in nature.

Several observations of importance in relation to the interpretation of laxation data should be mentioned. When an individual has been subsisting at a relatively high level of fiber intake and changes suddenly to a significantly lower level, there is a considerable hang-over effect. A period of four or more days is necessary before the effect of the low fiber diet on laxation can be clearly shown. This finding throws doubt on the validity of the conclusions drawn in studies of laxation in normal human beings, in which the experimental periods have been as short as four days. It is possible, therefore, for a person to exhibit different rates of laxation with the same fiber intake, depending on whether the observation of laxation rate in the low-fiber period is begun immediately or an intervening period of adjustment to the new level is allowed. When one goes from a low-fiber level to a

significantly higher one, the change in laxation is evident almost immediately. The question of habit with respect to laxation must also be considered; it is difficult to evaluate this factor. In the present study there was one definite instance of the positive effect on laxation of the mental state of the person.

The observations made in the present study indicate that the rate of laxation, although not the most sensitive criterion of laxative effects, nevertheless is the most valuable. The following reasons are suggested: The capacity of the large intestine for holding fecal material is quite considerable. By reference to tables 3 and 4 it becomes evident that the average weight of each stool may be increased by approximately 25 per cent. If the increased fiber intake is small and only sufficient to bring about an increase in the weight of the stool of about this order of magnitude, evidently this extra amount of ingested fiber will not bring about any increase in the rate of laxation. If the additional amount of material to be eliminated is so great that it cannot be taken care of by this normal capacity for increase in weight of the stool, more stools must be formed and passed; this will reveal itself in an increase in laxation rate.

The observations made in these investigations suggest that the various criteria used in measuring laxative effects, when ranked according to their sensitivity in revealing improvement in laxative conditions, would be listed as follows: (1) subjective impressions; (2) appreciable increases in the amount of intestinal contents eliminated each day; (3) average time of passage of material through the alimentary tract, and (4) rate of laxation, or number of movements per day. Criteria 3 and 4 have about the same degree of sensitivity. With this list in mind it becomes evident that, whenever the new conditions are sufficiently effective to bring about a definite change in the rate of laxation or in the time of passage of material through the alimentary tract, the effect on laxation may be regarded as having been demonstrated in very objective fashion.

Is there a physiologic roughage minimum? The data obtained in this investigation suggest strongly that there is such a thing as a minimum amount of roughage compatible with satisfactory laxation in healthy men. As a result of a review of all the data for fiber intake in relation to laxation rate, the following statements appear justified: A laxation rate of once a day, which, however, is not often accompanied by subjective impressions of satisfactory laxation, is obtained in healthy men with a daily fiber intake of from 50 to 60 mg. per kilogram of body weight. With some individuals an increase of this intake to from 70 to 80 mg. resulted in a satisfactory laxative condition. Other persons, notably those showing a greater tendency to constipation, required from 90 to 100 mg. per kilogram daily in order to insure good laxation. So far as we are aware, no data of this sort have been published before. These observations certainly suggest the existence of what might be called a physiologic roughage minimum, which, for normal men, might be expressed in terms of a daily fiber intake of from 90 to 100 mg. per kilogram of body weight.

In advancing this suggestion we do not wish to be understood as ignoring the influence on laxation of such factors as habit, emotional states, the presence in certain foods of substances having a stimulating action on intestinal motility, and other factors at present only vaguely recognized. The literature on laxation is full of recognition of the important part the indigestible food residues play in promoting elimination, but this recognition seems to have been only with respect to the qualitative aspect. The present investigation contributes information on the quantitative side. Numerous data for fiber content of foods are at hand in reference books available to students of nutrition, but quantitative data on the physiologic side have not been available. Without in any way minimizing the importance of other factors influencing laxation, or the presence in numerous foods of other indigestible materials besides fiber—pentosans, for example—it seems reasonable to attempt some application of the observations of this research in human physiology.

Following out this idea, calculations have been made to determine the amounts of various representative foods that are required as sources of fiber to supplement a "very constipating" and a "borderline" diet for an average healthy man weighing 70 Kg. in order to reach the physiologic fiber minimum previously suggested. Conceivably, somewhat larger amounts may be required to attain a physiologic fiber optimum. The calculations are presented in table 12 and have been applied to representatives of different types of food. Such a calculation can be extended readily to include many other foods.

TABLE 12.—*Sources of Fiber to Supplement a Very Constipating and a Borderline Diet* *

Food	Fiber Content, per Cent	For Use With: Very Constipating Ration (As Used in Part 3, for Example) Gm.	Ounces	Borderline Ration (As Used in Part 2, for Example) Gm.	Ounces
Bran, washed	14.9	25.5	0.8	15.4	0.5
Bran, whole	10.4	36.5	1.2	22.1	0.75
Grapes	4.3	88	3.0	53	1.75
Peaches	3.6	106 (2)†	3.5	64	2.1
Pears	2.7	141 (2)	4.3	85	2.8
Apples	1.2	316 (4)	10.5	191	6.3
Banana	1.0	380 (5)	12.6	230	7.6
Cabbage	1.1	345	11.5	220	7.0
Spinach	0.9	421	14.0	255	8.1
Lettuce	0.7	543	18.1	328	11.0
Peanuts	2.5	156	5.0	96	3.2
Almonds	2.0	190	6.3	115	3.8
Whole wheat bread	1.2	316	10.5	191	6.3
Graham bread	1.1	345	11.5	220	7.0
Rye bread	0.5	760	25.3	460	15.3

* These calculations are based on the following data and assumptions: very constipating diet contains 2.5 Gm. of fiber per day; borderline diet has 4 Gm. of fiber per day. A man weighing 70 Kg. is to receive a daily total of 6.3 Gm., or 90 mg. of fiber per kilogram daily. The amounts in columns 3 and 5 yield 3.8 and 2.3 Gm. of fiber, respectively.

† Numbers in parentheses indicate approximate number of peaches, pears, and the like, yielding this amount. In the case of the banana and similar foods, the raw starch present probably exerts a definite influence on laxation; likewise, organic acids in the case of other fruits, berries and similar foods.

Inspection of table 12 shows clearly that whole and washed bran, because of their relatively great fiber content, have high supplementing value in laxation. Of the fruits listed, grapes, peaches and pears prove to be of greatest value. The vegetables cabbage, spinach and lettuce are next. Peanuts and almonds, although richer in crude fiber than these vegetables, probably cannot contribute a very large amount of fiber to the diet because of their content of oil and consequently high caloric value. The common breads given in the table have about the same content of fiber as the apple, the banana and the leafy vegetables, and therefore should be of about equal value as sources of roughage; when these cereal products are eaten in only moderate quantities, they contribute only small amounts of fiber; when eaten in large amounts as staple foods, their yield

of fiber would be comparable to that of the fruits and vegetables cited. This indicates that these breads can serve as valuable sources of food fiber. It is recognized that these estimations are only approximate, but it is believed that they can serve as aids in the wise selection of foods with the view to securing intake of the "physiologic fiber optimum."

COMMENT

Reference has already been made to the widely discussed criticisms by Alvarez of the use of bran in the diet. The results of this research give indications of the potency of bran as a laxative in the case of healthy men. The evidence pointing to the existence of a physiologic roughage minimum—or shall we say optimum—is worthy of serious consideration and seems to afford a basis on which to rest an explanation of the controversy that has arisen concerning the value of bran as a laxative. It is quite likely that many cases of constipation are due simply to failure to ingest sufficient roughages, either through ignorance or through an unwarranted assumption that a high-roughage diet is being ingested; these individuals may really be subsisting on a diet the roughage content of which is below the physiologic minimum and therefore should obtain relief by raising the level of roughage intake to the optimum. The data secured in this research are believed to be of value in answering the question as to what level of roughage intake constitutes the physiologic optimum. Another group of cases exhibiting constipation and much more likely to come to the attention of the clinician is made up of individuals presenting other symptoms, such as pain, along with the constipation. Cases of spastic colitis and similar conditions, in which an irritable colon is an important feature of the syndrome, belong in this class. It is quite possible that the form of the roughage is of special importance for these persons; the colonic wall may be unduly sensitive to discrete particles in such cases. Finally there should be mentioned the cases of constipation observed in the clinic that are due to obstructive conditions, such as a misplaced uterus, or neoplasms, for example. It is obvious that raising the level of fiber intake to the physiologic minimum may be a totally inadequate therapeutic measure in such cases. With these considerations in mind, therefore, it should be clear that sweeping generalizations may be quite unwarranted.

SUMMARY AND CONCLUSIONS

The laxative value of whole wheat bran was studied in three series of experiments on eleven healthy men subsisting on carefully controlled diets. This was compared with the value for laxation of a bran that had been treated with weak acid in order to remove the phytin. Measured by the several criteria used in this study, there was no difference in the laxative values of these two products. It was concluded that the laxative value of bran is due predominantly to the fiber present, regardless of phytin or other bran constituents that are readily extractable by treatment with weak acid. The statement often made in the literature that "the laxative value of bran is due largely to the phytin which it contains" is erroneous. In making bran products for human consumption the indications of this research are that the laxative value of such materials may be estimated fairly accurately from the fiber content.

The data obtained in this research support the view that in healthy men a definite relationship exists between the rate of laxation and the amount of fiber ingested daily per unit of body weight. This points to the existence of a physiologic roughage minimum, which, in terms of fiber, is obtained with an intake of from 90 to 100 mg. of fiber per kilogram of body weight daily. Such an intake of fiber by healthy men should contribute definitely toward securing satisfactory laxation. A somewhat greater fiber intake may be required to secure the physiologic fiber optimum. In an attempt to indicate practical applications of these observations, calculations of additional fiber in terms of common foods, required by a healthy man weighing 70 Kg. to supplement borderline and markedly constipating diets, have been made.

333 Cedar Street.

DIFFERENTIAL DIAGNOSIS BETWEEN TYPHUS AND SPOTTED FEVER

REPORT OF A CASE AND THE ISOLATION OF A NEW MILD TYPE OF SPOTTED FEVER VIRUS

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The occasion for differential diagnosis between typhus fever and Rocky Mountain spotted fever has recently assumed importance. Although it is stated in current textbooks [1] that the likelihood of encountering both typhus and spotted fever in the same locality is extremely unlikely, newer studies have revealed that spotted fever is not localized in the Northwest but that a distinct variety is widespread east of the Appalachian Mountains.[2] Cases have also been reported in Texas.[3] Typhus fever, on the other hand, has been observed not only in the East and Southeast but also in California, in Minnesota [4] and as far north as Montreal.[5] The diagnosis of the latter two cases, however, was not proved. The Minnesota case was diagnosed on clinical grounds alone in 1915 before refinements for laboratory diagnosis had been developed. The case observed in Montreal was diagnosed from clinical and pathologic data, but no confirmatory immunity tests were made. It is important, therefore, considering the widespread distribution of both diseases, that the true nature of infection should be determined in every sporadic case of either disease.

Clinically, there are many points of resemblance between spotted fever and typhus fever, especially Old World typhus, as pointed out by Ricketts and Wilder.[6] Endemic typhus, formerly called Brill's disease, is a relatively mild infection. Differentiation may be made to some extent in regard to the season during which the disease occurs; epidemic (Old World) typhus is most prevalent in winter; endemic typhus in summer and fall; and spotted fever in spring and summer. The

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overlapping of incidence unfortunately is great enough to render differentiation on this basis uncertain. If a history of previous insect bite is available it is important to know that epidemic typhus is transmitted by lice, endemic typhus by rat-fleas, and spotted fever by ticks. The specific histologic changes in the blood vessels of the skin in typhus fever serve to distinguish it from other acute infectious diseases, but the lesions are similar to those found in spotted fever and are of no

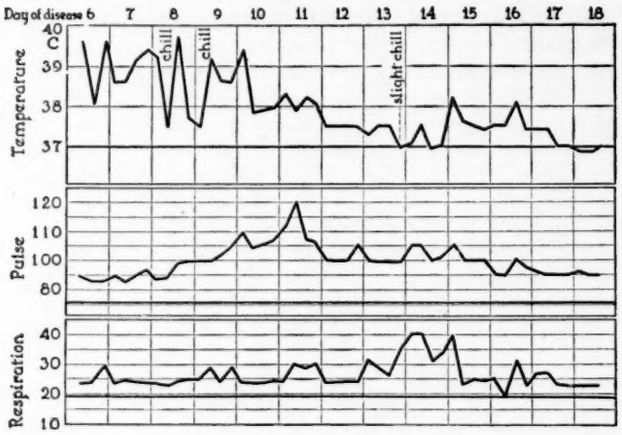

Fig. 1.—Temperature, pulse and respiration record of a patient with spotted fever. The relatively slow pulse appeared early in the course. The high respiratory rate accompanied bronchopneumonia.

value in differentiation. The only certain method of differentiation requires immunologic procedures which are based on the observations of Ricketts and Wilder,[6] who showed that animals immune to typhus fever are not immune to spotted fever, and vice versa.

An example of the methods employed in establishing an etiologic diagnosis is described in a case report by Otto.[7] A technician, accidentally infected in a laboratory, contracted a fatal illness thought at first to be typhus fever. The infecting virus obtained from the patient's blood was inoculated into guinea-pigs for propagation by passage from animal to animal. By subsequent immunity tests, the virus proved to be that of spotted fever.

The following case is presented because of twofold interest: (1) a presentation of the methods employed in establishing an etiologic diagnosis, and (2) the identification of a new mild type of spotted fever.

REPORT OF CASE

A Jew, aged 67, was proprietor of a rooming house for transients in a densely populated portion of the city. There was nothing pertinent in his family history or past history; his health was usually good.

While at a nearby summer resort, he was bitten twice by wood ticks. About ten or twelve days later (May 18, 1931) he noted malaise. On the following day there was high fever, dizziness and photophobia. He drove his automobile home to the city and narrowly escaped several accidents en route. On the same day he was obliged to go to bed by the severity of his symptoms. He complained of partial deafness. The first chills occurred May 21. About this time (third day of illness) a rash was noted on his arms. He entered a hospital on the sixth day of his illness, under the care of Dr. T. T. Warham.

The patient appeared to be very ill; muttering stupor was present, but when aroused he cooperated satisfactorily. The lips and ears were cyanotic, the throat was reddened, and there were punctate injected areas over the uvula and soft palate. There was slight conjunctivitis. The pupils were equal and reacted normally. The lungs were clear. A systolic murmur was audible. The blood pressure was 120 systolic and 50 diastolic. The liver and spleen were not palpable nor were any abnormal lymph nodes evident. The reflexes were undisturbed. The eruption involved most of the body surface except the head and the neck and was particularly striking in the palms and soles. The rash was maculopapular, discrete and confluent, and of a dusky pink. The color faded partially on pressure. The laboratory tests showed 7,000 leukocytes, a trace of albumin and hyaline casts in the urine, and a negative Widal test. A blood culture taken at this time was sterile. Typhoid was considered as a possible diagnosis.

Two days later on the eighth day of the illness the rash became hemorrhagic and no longer faded on pressure. At this time one of us (H. L. U.) was called in consultation. Because of the developing rigidity of the patient's neck, meningitis was suspected, but the spinal fluid proved to be normal. Typhus fever was then considered. On the ninth day, a roentgen examination revealed a density in the left lung, but clinical evidence of pneumonia was delayed for three days. Bronchitis had been present for several days but the cough became much worse. The patient became delirious and appeared to be moribund. He was incontinent, restless, and at times excited. At this time one of us (H. A. R.), who had previous experience with Old World typhus, saw the patient and on clinical grounds alone agreed with the impression of typhus fever.

The Weil-Felix reaction at this time was positive in a low dilution, 1:80, and doubtfully positive at 1:160 (National Institute of Health). Oxalated blood was injected intraperitoneally into guinea-pigs on this, the twelfth day of illness. A leukocytosis of 12,000 accompanied the pneumonia.

After this time there was gradual improvement, and on the thirteenth day the temperature reached the normal level but rose again for several days before convalescence began, as shown in figure 1. The rash by this time had faded to a dirty brownish color. The patient left the hospital on the twenty-ninth day after the onset of illness and was still confused mentally. The titer of the Weil-Felix reaction on the twenty-fourth day was 1:1,280.

It is of interest to note that the cases of Otto[7] and Kemp,[3] the cases reported along the Atlantic seaboard,[2] and our own were first considered to be typhus fever but proved later by immunologic methods to be spotted fever. As a result of previous experience with typhus fever we were led to consider typhus fever first in our own case, although the infection took place early in May. The fact that the patient owned a rooming house and accommodated transients suggested the possibility of the importation of some typhus vector by a guest coming from an endemic center. It was not until later when the patient became rational and when Dr. Perkins of the Minnesota State Board of Health made an investigation that a history of tick bites was obtained. Tick bites are very common in Minnesota and have never been regarded seriously heretofore. Nevertheless, Rocky Mountain spotted fever was then considered. Certain clinical features, such as the presence of conjunctivitis, the deafness, the development of pneumonia, and the absence of splenic tumor, resembled the behavior of Old World typhus. The gradual onset and defervescence, the early appearance of the rash on the arms on the third day, and the disturbances

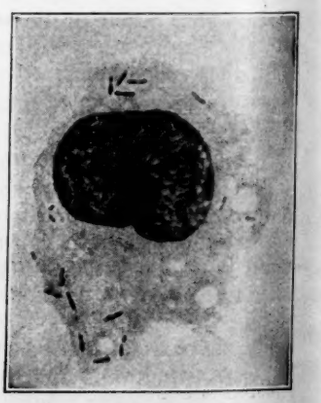

Fig. 2.—Rickettsia of Minnesota type of spotted fever located in a cell obtained from the scrotal exudate of a guinea-pig. Giemsa stain.

7. Otto, R.: Centralbl. f. Bakt., Orig. **106**: 279, 1928.

of the central nervous system favored spotted fever as a diagnosis. The Weil-Felix reaction is of no value in differentiation, since it occurs in both diseases.

It is clear, then, that although certain clinical and epidemiologic differences exist between spotted fever and typhus fever, positive diagnosis can be made only by laboratory methods involving animal experimentation.

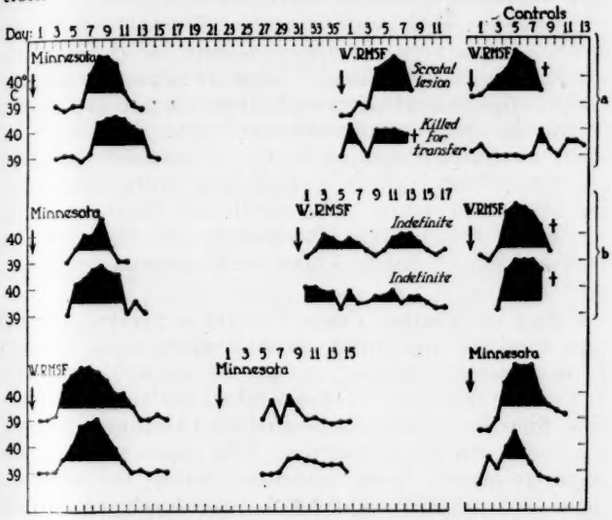

Fig. 3.—Cross-immunity tests with the Bitter Root (Western) strain of spotted fever: Daily temperature records of (*a*) guinea-pigs convalescent from Minnesota strain and not immune (!) to spotted fever (Dyer and Rumreich); (*b*) two animals convalescent from Minnesota strain which are immune to spotted fever (experiment by Parker); two animals convalescent from spotted fever which are immune to Minnesota strain. Control animals reacted positively for each group, except one animal in *a*. The arrows indicate the time of inoculation.

BIOLOGIC DIFFERENTIATION

Two guinea-pigs were inoculated intraperitoneally with 2 cc. of oxalated blood obtained from the patient on the twelfth day of his illness. One guinea-pig failed to react, but the second developed fever seventeen days later, which lasted three days. Blood was obtained by heart puncture on the second day and inoculated into two fresh animals. Fever appeared on the sixth and eighth days, respectively. The strain, for convenience called "Minnesota" strain, was thus established in guinea-pigs. Transfers to fresh animals were then made by removing the brain aseptically on the second or third day of fever, emulsifying it in physiologic solution of sodium chloride and injecting it intraperitoneally into fresh animals. With small doses of from one-tenth to one-twentieth brain, fever often failed to develop. When one-fourth brain was injected the reaction was more constant. Of 68 animals thus inoculated, fever developed on the fifth day in 3, sixth day in 10, seventh day in 21, eighth day in 16, ninth day in 3, and from the tenth to the twelfth day in 5. Fever failed to appear in ten inoculated guinea-pigs. Fever lasted one day in 3, two days in 11, three days in 7, four days in 7, five days in 4, six days in 8, and seven days in 1. It was then found that the transfer of blood was more convenient and gave more constant results. Thereafter, more than 90 animals were inoculated with 3 cc. of blood obtained by heart puncture from lightly anesthetized guinea-pigs on the second and third days of fever. By this method, fever usually developed earlier, on the fifth or sixth day, and lasted on the average two or three days longer. Typical fever curves are illustrated in figures 3, 4 and 5. None of the inoculated animals died. Scrotal edema and redness, with adherence of the testes to the tunica sac, occurred in about 50 per cent of the males. Several animals were killed during the fever and examined. No gross pathologic changes were observed aside from an enlarged spleen, scrotal swelling and inflammation.

Histologically, the scrotal exudate contained polymorphonuclear leukocytes, macrophages and mesothelial cells. Certain mesothelial cells contained from 20 to 40 rickettsia per cell (fig. 2). The rickettsia were bacillary and often appeared to be diploform. They were somewhat larger and fewer to a cell than the rickettsia observed in the scrotal exudate in endemic typhus. Far fewer cells contained rickettsia of the Minnesota strain than in endemic typhus. Pinkerton,[8] using tissue culture methods, succeeded in maintaining viable rickettsia for several weeks in the frozen state.

In one animal there was a marked diffuse perivascular infiltration of lymphocytes around the arterioles of the vas deferens. The vessel walls were normal. There was mononuclear cell infiltration around certain arterioles of the tunica. Here and there was slight evidence of endothelial proliferation. The tunica was involved in a nonspecific inflammation and covered with exudate. No important changes were found in the brain.

A male rabbit inoculated with blood virus developed a low fever after five days, which lasted for three days. The scrotum was red and slightly swollen.

The characteristics exhibited by the Minnesota strain in guinea-pigs differ in several respects from the behavior of other varieties of rickettsial diseases. The Western Bitter Root type (fig. 3) and Eastern type spotted fever (fig. 4) have a shorter incubation period, cause a more violent fever reaction, and often cause death of the animals. The Bitter Root strain causes superficial necrosis of the scrotum, ears and snout. Scrotal involvement, on the other hand, rarely occurs with Eastern type spotted fever, and exudate covering the tunica and containing rickettsia has not been found.

There are greater similarities between the behavior of the Minnesota strain and typhus fever. Guinea-pigs rarely die from Old World typhus. Scrotal reaction

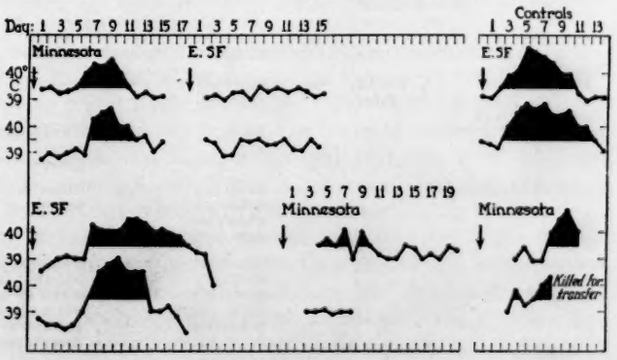

Fig. 4.—Immunity tests with Eastern spotted fever. Guinea-pigs immune to Minnesota strain do not react to Eastern spotted fever virus, and vice versa. All controls reacted positively.

occasionally occurs and rickettsia are found in the exudate.[9] Brain lesions, however, are frequent and characteristic in typhus fever but do not occur with the Minnesota strain.

In endemic typhus in guinea-pigs, the incubation period is longer, the fever curve is more irregular (fig. 5), the scrotal swelling is more constant, and the exudate is more copious and contains many more

8. Pinkerton, Henry: Personal communication to the authors.
9. Pinkerton, Henry: J. Infect. Dis. **44**: 337 (May) 1929.

rickettsia[10] than in infections due to the Minnesota strain. It appears, therefore, that the Minnesota strain has certain features in common with both spotted fever and typhus and is either a variety of one or the other, or an intermediate type. The similarities and differences in the reactions of various rickettsial diseases in guinea-pigs are shown in the accompanying table.

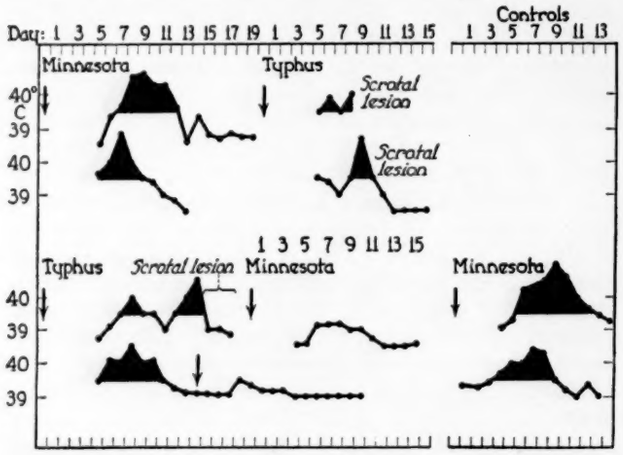

Fig. 5.—Immunity tests with endemic typhus virus. Two guinea-pigs convalescent from Minnesota strain are not immune to typhus virus; two animals immune to typhus are immune (!) to Minnesota strain. Controls are positive.

IMMUNITY EXPERIMENTS

Cross-Immunity Tests with the Bitter Root Strain of Spotted Fever.—Six guinea-pigs immune to spotted fever as a result of convalescence from infection with the Bitter Root strain were sent to us through the courtesy of Dr. R. R. Parker from the U. S. Public Health Service Laboratory at Hamilton, Mont. These animals, together with five fresh guinea-pigs, were inoculated with the Minnesota strain. None of the guinea-pigs convalescent from spotted fever manifested signs of infection, while the fresh animals did. A few of the temperature charts are illustrated in figure 3.

Comparative Observations in Varieties of Experimental Rickettsial Disease in Guinea-Pigs

	Incubation in Days	Duration in Days	Mortality per Cent	Scrotal Reaction in Males	Exudate on Spleen	Brain Lesions
Bitter Root spotted fever...	2-5	Usually fatal	80+	Superficial necrosis	?	Frequent
Eastern spotted fever.....	2-6	5-10	25	Rare	.....	Many small focal glioses
Old World typhus	5-10	5-10	0	Rare, few rickettsia when exudate occurs	Often	Constant numerous
Endemic typhus..	2-19	2-10	0	Constant with copious exudate; many rickettsia	Occasionally	Frequent in females; in males only after subcutaneous inoculation
Minnesota strain.	5-12	1-7	0	50% with exudate, few rickettsia	Rare	Rare

Conversely, three animals immune to the Minnesota strain were sent to Dr. Parker for inoculation with Bitter Root spotted fever. Two showed a low-grade type of fever (indefinite reaction) while one remained unaffected.[8] Three control animals developed typical spotted fever, two of which are illustrated in figure 3 *b*.

Four animals immune to the Minnesota strain were also sent to Drs. Rumreich and Dyer, at the National Institute of Health in Washington, D. C., where similar tests were made. Curiously, when these animals were inoculated with the Western type of spotted fever, two of the Minnesota immunes developed fever (fig. 3 *a*) with scrotal lesions typical of Western spotted fever. The remaining two showed atypical low fever.[8]

Immunity Tests with Eastern Spotted Fever.—A strain of this type of virus was sent to us from the National Institute of Health for tests in our laboratory. Guinea-pigs immune to the Minnesota strain as a result of convalescence therefrom proved to be immune to the virus of Eastern spotted fever. Conversely, animals recovered from Eastern spotted fever were immune to the Minnesota strain. The results are shown in figure 4. Similar results were obtained by Dr. Pinkerton at Harvard University, to whom the Minnesota strain was sent.[8]

Effect of Spotted Fever Vaccine.—Several guinea-pigs received two intraperitoneal injections of spotted fever vaccine (supplied by the Montana laboratory) at five-day intervals. Three weeks after the first injection they were inoculated with the Minnesota strain, together with three controls. The vaccinated animals were protected from infection, while the controls developed typical fever, and two developed scrotal swelling.

Immunity Tests with Endemic Typhus Virus.—A strain of typhus virus (Wilmington) was supplied to us by Dr. Pinkerton and established in our laboratory. Immunity tests showed that guinea-pigs convalescent from infection with the Minnesota strain were not immune to typhus virus. Pinkerton obtained similar results. Surprisingly, five animals recovered from typhus fever in our hands proved to be immune to Minnesota virus, while four fresh ones developed typical reactions (fig. 5). Pinkerton's results differed in regard to the latter result. In his experiments, typhus failed to protect against the Minnesota strain; in fact, typhus immunes were used to propagate the Minnesota strain.[8]

COMMENT

The clinical report of a case is presented which was at first believed to be typhus fever but proved to be spotted fever after immunity experiments had been made. Emphasis is laid on the necessity of biologic procedures in determining an etiologic diagnosis. Differentiation on the grounds of clinical, epidemiologic or pathologic data is uncertain.

Studies of the reaction of the virus after its establishment in guinea-pigs indicated a number of features which distinguish it from other strains of rickettsial disease thus far reported. The low virulence for guinea-pigs, the scrotal swelling, and the presence of rickettsia in the scrotal exudate resembles the reaction of typhus more than that of spotted fever. On the other hand, the results of the immunity tests point to a closer relationship with spotted fever. The conflicting results of several tests, namely, the failure in two instances of the Minnesota strain to confer immunity against Western spotted fever, as found by Dyer, and the apparent protection conferred by typhus fever against the Minnesota strain in our experience, are puzzling. These results suggested that the Minnesota strain might be of an intermediate variety.

We feel, however, that another explanation is likely. The Minnesota strain produces a comparatively mild

10. Pinkerton, Henry: J. Exper. Med. **54**: 181 (Aug. 1) 1931

disease in guinea-pigs and may thereby evoke weak immunity, too weak to protect regularly against a strain of such high virulence as the Bitter Root variety of spotted fever. On the other hand, endemic typhus may conceivably confer a certain grade of nonspecific immunity which, in our hands at least, was sufficient to protect guinea-pigs against the weakly virulent Minnesota strain. But from the results of other tests, namely, the reciprocal immunity conferred by the Minnesota strain and Eastern spotted fever, and by the protection conferred against infection with the Minnesota strain by spotted fever vaccine, it appeared that the Minnesota strain represents an exceptionally mild type of spotted fever.

TUBERCLE BACILLI IN THE STOMACH CONTENT OF CHILDREN WITH POSITIVE TUBERCULIN TEST

PRELIMINARY REPORT

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LUCY MISHULOW, B.A.
BÉLA SCHICK, M.D.
AND
DOROTHY BEHNER, M.A.
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The demonstration of tubercle bacilli in the stomach content of children is important because:

1. It may help to make the diagnosis of tuberculosis in certain cases presenting negative physical and roentgen signs and showing a positive tuberculin test as the only indication of tuberculosis.

2. It may help in estimating the activity of the tuberculous process.

3. It makes it possible to separate the children who are passing tubercle bacilli, and therefore are dangerous to their surroundings, from those who are healed or well arrested and do not spread tubercle bacilli and therefore are harmless to their environment.

To wash out the stomach and search for tubercle bacilli in the sediment of the stomach content is a cumbersome method both for the patient and for the physician. Inoculation of guinea-pigs with the sediment of the stomach lavage is an essential part of the method but makes it expensive. Therefore, these procedures should be used only in those cases in which one cannot avoid them; i. e., in children under 4 or 5 years of age who cannot be taught to expectorate.

This study was made on forty children in the Sea View Hospital.

TECHNIC

The stomach lavage was carried out in the morning on an empty stomach, from 200 to 300 cc. of physiologic solution of sodium chloride being used. Only one lavage was done in each case.

The specimens were centrifugated for one hour at high speed. The sediment was suspended in about 3 to 5 cc. of sterile water and treated with an equal amount of 3 per cent sodium hydroxide. This was incubated at 37 C. for thirty minutes and made neutral to phenolphthalein with 15 per cent hydrochloric acid.

In the early part of this investigation, cultures of some of the treated sediment were grown on Corper's and Löwenstein's mediums and the remainder was inoculated into guinea-pigs subcutaneously. But most of our specimens were contaminated with molds, and the cultures were so badly overgrown that we discontinued making cultures and inoculated the entire sediment into guinea-pigs. The contamination was probably due to the fact that at least twenty-four hours passed between the stomach lavage and the bacteriologic study, which, for technical reasons, could not be avoided.

Smears were made of the sediment of each specimen and examined for acid-fast bacilli, but all of them were negative.

If any of the guinea-pigs died and showed suspicious lesions but no acid-fast bacilli, the suspicious tissue was subinoculated into other guinea-pigs.

In all guinea-pigs in which the lesions were grossly tuberculous, a smear examination was made, and the result was recorded as positive only when acid-fast bacilli were found. Altogether, we used 173 guinea-pigs in this experiment. The number of animals used seems to have but little to do with the frequency of positive results. In the group that gave positive results, we used an average of two pigs per child. In the cases that gave negative results, we inoculated an average of four guinea-pigs per case.

In one case, tests on both guinea-pigs were negative, but there was one colony on Löwenstein's medium which proved to be fully virulent for guinea-pigs.

SELECTION OF CASES

All cases had a positive tuberculin test. Most of them had a Pirquet test first, and if this happened to be negative a Mantoux test of 0.1, 0.2, 2, 5 or 10 mg. of old tuberculin was done.

All the patients were afebrile or nearly so, having a temperature of less than 100 F. by mouth or by rectum. The flat temperature curve was occasionally interrupted by a febrile acute nontuberculous condition lasting a few days.

All these children gained weight, the speed of gain being different in the individual cases. It was not difficult to select afebrile children and children who gained in our tuberculosis institution because by proper limitation of activity, i. e., more bed rest, we were able to make most of our patients gain and become afebrile. The children who were continuously losing weight and had fever in spite of forced rest and open air treatment in our institution were in most instances seriously ill, presented far advanced cases, had abundant positive sputum, positive throat swab or positive feces examination, and were not included in this study.

AGE

The ages of the children under examination varied from 2 years to 10⅓ years. The average age of the seven children who gave positive stomach lavage was 4.4 years, whereas the average age of those who were negative was 5.9 years. This finding might be interpreted in two ways:

1. The younger the child, the more likely it is that he swallows his sputum instead of spitting it up.

2. The younger the child, the more likely it is that we are dealing with a fresh and active tuberculous process, the sign of which is the presence of bacilli in the expectoration or in the stomach content.

From the Sea View Hospital and the City of New York Department of Health.

The bacteriologic work was done in the Bureau of Laboratories of the City of New York Department of Health, under the general supervision of Dr. William H. Park, by Miss Lucy Mishulow and Miss Dorothy Behner. The lavage itself was carried out by Dr. Radwin, one of the resident physicians of Sea View Hospital. We purposely did but one single stomach lavage on this group of forty children. We are convinced that, by repetition of the procedure, the frequency of positive results would increase. However, we were mainly interested in the results that one single lavage gave us.

SPEED IN GAINING WEIGHT

Our entire group gained weight at an average of 0.6 pound (272 Gm.) a month. The average gain for the positive lavage group was 0.55 pounds (250 Gm.) and of the negative, 0.64 pound (290 Gm.) a month. But as the average gain in a group of children 4.4 years of age is supposed to be greater than in a group of children 5.9 years of age, it is obvious that the relative speed of gain of children who gave positive results was definitely smaller than the relative rate of gain in the group who gave negative stomach lavage. This somewhat slower average gain in weight in the positive stomach lavage group also speaks for our supposition that the presence of the bacilli in the stomach content points toward fresh or active tuberculosis. On the other hand, some authors, like Holt, think that 4 year old and 6 year old children gain with equal speed. If so, the slight difference between the two groups would be insignificant.

EXAMINATION OF FECES FOR TUBERCLE BACILLI

One would think that tubercle bacilli in the stomach content passing through the intestine could easily be recovered from the feces. During the hospitalization of our forty children, twenty-five had from one to five examinations of the feces. One of the children who had positive stomach lavage and fourteen who had negative ones had no feces examination. All the stools of the others examined were negative for tubercle bacilli. The explanation of these negative observations was that probably the few bacilli passing the stomach were so diluted in a big mass of feces that it was hard to find them unless one used practically the total amount of feces for examination. In our hospital 50 Gm. of stool was used for the search for acid-fast bacilli.

The other fact that has to be considered in evaluating the discrepancy between the results of our stomach lavage and the feces examination is that the two examinations were not made at the same time; the feces examination was an admission routine, whereas stomach lavage was done as a special piece of work a few months later. On the other hand, if the two methods were equally sensitive, one would expect more positive observations on admission than later on, because these forty children were all improving during their hospital stay.

The feces and sputum examinations were made in the pathologic laboratory of Sea View Hospital under the supervision of Dr. Cornelius Mezei.

EXAMINATION OF SPUTUM

The sputum of thirty-five children in this group of forty was examined with three positive results. These three positive ones were in the group that was negative with stomach lavage. But this is not necessarily a contradictory finding, because the sputum examinations and the lavage were not done at the same time. The positive sputum occurred one year and one and one-half years before and, in the third case, two months after the stomach lavage was done. Of the five children whose sputum was not examined, four were in the negative and one was in the positive gastric lavage group.

COUGH

Cough is not as frequent among tuberculous children as it is in tuberculous adults. None of the patients who had a positive lavage, coughed, and only seven, i.e., 21 per cent of those who had a negative lavage, coughed noticeably. Four of these patients also had bronchiectasis, and three, some form of pleurisy. The severity of the tuberculosis and the cough did not seem to parallel each other.

ONSET OF TUBERCULOSIS

Our information as to the onset of tuberculosis is inaccurate because we had to take the word of the family and also because the onset in some cases was insidious. In many of the cases there were never any symptoms. The child was sent to Sea View Hospital on the basis of a positive tuberculin-test done in some health station or clinic as a routine. Judging as best we could, we estimated that the average duration of tuberculosis up to the present date in our negative stomach lavage group was twenty-nine months and in our positive stomach lavage group, twenty-one months. This bears out again the same point that we mentioned before; i. e., the fresher the tuberculous lesion, the more likely one is to find positive sputum or positive stomach lavage.

TUBERCULIN TESTS

In all the cases but four, a Pirquet test preceded the Mantoux test. All the Pirquet tests were positive except three in the negative lavage group, but even these three cases gave a positive Mantoux test.

We tried to determine some relationship between the size of the reaction of the Mantoux test and the activity and intensity of the process. Although it is hard to evaluate our Mantoux tests because different doses of old tuberculin were used, there seems to be no relationship between the size of the test and the degree and activity of tuberculosis.

PHYSICAL EXAMINATION

It is well known that the childhood type of tuberculosis frequently gives very meager clinical chest signs for percussion and auscultation. In our positive lavage group, we were not able to obtain pathologic physical signs in five out of seven cases, i. e., in 71 per cent; and in the negative stomach lavage group, twenty-one out of thirty-three cases, i. e., 64 per cent, were negative by percussion and ausculation. We expected to find negative chest signs less frequently in the cases that gave positive stomach lavage as compared with the negative group. It is interesting that among the patients who had tubercle bacilli in their stomachs, 71 per cent did not give positive physical signs at all, except on roentgen examination.

CLASSIFICATION OF CASES FROM POINT OF VIEW OF TUBERCULOSIS

From the accompanying table one sees that pleurisy alone or combined with different forms of tuberculosis predominated in the group of children who gave positive stomach lavage results. By this we mean that out of seven patients five presented some sort of pleurisy; i. e., 71 per cent. On the other hand, in the negative lavage group, only seventeen out of thirty-three cases, i. e., 51 per cent, were combined with pleurisy. Of course, pleurisy in the different cases was in various stages of resorption, and even an interlobar line in the roentgenogram was considered as pleurisy.

The different forms of tuberculosis in our study are shown in the table.

PROGNOSIS

We tried to evaluate all our cases from the point of view of prognosis, considering the type of tuberculous symptoms, age and general condition of the child. To those children who, according to our judgment, had the best chance for recovery, we gave a prognosis score of

100 per cent. To those children who, according to our opinion, will surely die of tuberculosis, we gave the score of 0 per cent. Patients who had an intermediate survival chance obtained a score between the extremes of 0 per cent and 100 per cent. Before knowing the result of the stomach lavage we gave a survival chance to our patients. The average survival grade on the patients who gave a positive lavage was 74 per cent, whereas on those giving negative results for tubercle bacilli by the stomach lavage the same score averaged 80 per cent. This again bears out the same point which was suggested in three previous instances, that a positive stomach lavage occurs more often in the presence of active tuberculous lesions and among young children. All these three factors, early age, fresh tuberculous process and active tuberculous process, make the prognosis worse. During the ten or twelve months that have elapsed since we started this study, twenty-five of the thirty-three, i. e. 75 per cent, of the children who gave negative gastric lavage left the hospital

Forms of Tuberculosis

Form of Tuberculosis	Positive Lavage	Negative Lavage
Osteomyelitis and hilus gland tuberculosis	0	1
Spondylitis	1	0
Latent tuberculosis	0	5
Hilus gland tuberculosis	0	2
Pleurisy with effusion	1	3
Interlobar pleurisy	0	1
Mediastinal pleurisy(?)	0	1
Pleurisy with effusion and central infiltration	1	1
Interlobar pleurisy and central infiltration	1	2
Interlobar pleurisy and parahilar infiltration	1	1
Interlobar pleurisy, central infiltration, scrofulosis	0	1
Pleurisy with effusion; interlobar pleurisy	0	1
Pleurisy with effusion and parahilar infiltration phlyctenular conjunctivitis	0	1
Mediastinal pleurisy(?) and bronchiectasis	0	1
Interlobar pleurisy and epituberculosis	0	1
Interlobar pleurisy, hilus gland tuberculosis phlyctenular conjunctivitis	0	1
Mediastinal(?) pleurisy, perihilar infiltration, phlyctenular conjunctivitis	1	0
Pleural adhesions and hilus gland tuberculosis	0	1
Empyema and latent tuberculosis	0	1
Hilus gland tuberculosis and bronchiectasis	0	2
Central infiltration and bronchogenic dissemination of tuberculosis	0	1
Central infiltration	1	1
Perihilar infiltration	0	3
Basal infiltration and tuberculosis verrucosa cutis	0	1

apparently cured, whereas only four of seven, i. e., 57 per cent, of the positive stomach lavage patients were ready for discharge. The eleven who are still in the hospital are presenting the same course as described in this article; i. e., they are gaining weight and are afebrile. By throat swabs none of them showed the presence of tubercle bacilli.

COMMENTS

The presence of tubercle bacilli in the stomach can be explained in three ways:

1. By far the most frequent cause is a tuberculous lung process which has connection with the air passages, and the bacilli are carried up to the pharynx either by the ciliary movement of the respiratory epithelium or by cough. From the pharynx the bacilli are swallowed.

2. Far less frequently there is a tuberculous lesion in the middle ear, in a sinus or in the nasopharyngeal cavity.

3. A third possibility is that the tubercle bacilli in the stomach were carried there by contaminated food. The probability of this is very small.

4. There is very rarely a secondary tuberculous lesion in the stomach itself. A primary lesion has never been described. This is usually developed as a part of a generalized tuberculosis.

In our study of the forty improving tuberculous patients who were all gaining weight and were all afebrile, the stomach lavage gave positive results in seven, i. e., 17.5 per cent. None of them had positive feces examination and only three of them (i. e., 7.5 per cent) gave positive sputum results at any time. Therefore, we think that stomach lavage is a useful method for the search of tubercle bacilli among children under 4 and 5 years of age who cannot be taught to expectorate.

LITERATURE

The first author who suggested the use of stomach lavage for finding tubercle bacilli was Meunier in 1898. Armand-Delille, in 1927, published the next extensive article on the subject. Since that time similar articles have appeared in increasing numbers.[1] It is hard to compare other people's work with our own, because their selection of cases and the bacteriologic technic used is different from each other's and from ours.

CONCLUSION

We succeeded in demonstrating in seven out of forty tuberculous children (17.5 per cent) tubercle bacilli in the stomach content. The average age of our group was 5.9 years. All of them were afebrile and gained weight.

1148 Park Avenue.

1. The following are all the articles that we were able to find on the subject up to January, 1932:

Cantonnet: Arch. de Pediat. d'Uruguay **1:** 575 (Nov.) 1930.
Christoffersen, N. R., and Frederiksen, J. A.: Ugesk. f. læger **93:** 587-589 (May 28) 1931.
Armand-Delille, P. F.: Pulmonary Tuberculosis in Infants, Am. J. Dis. Child. **34:** 547 (Oct.) 1927; Armand-Delille, P. F., and Vibert, J.: Presse méd. **35:** 402 (March 30) 1927; Paris méd. **1:** 18-20 (Jan. 3) 1931.
Drucker: Acta pædiat. **11:** 415, 1930.
Friedlaender, Axel: Jahrb. f. Kinderh. **127:** 178 (April) 1930; Acta pædiat. **11:** 190, 1930.
Meunier: Presse méd. **2:** 81 (Aug. 13) 1898.
Opitz, H.: Deutsche med. Wchnschr. **54:** 2139 (Dec. 21), 2175 (Dec. 28) 1928; **56:** 1995 (Nov. 21) 1930; Acta pædiat. **11:** 186, 1930; München. med. Wchnschr. **78:** 949 (June 5) 1931.
Poulsen, Valdemar: Jahrb. f. Kinderh. **125:** 206 (Oct.) 1929; Norsk. mag. f. lægevidensk. **91:** 1061 (Oct.) 1930; Pulmonary Tuberculosis in Children, Am. J. Dis. Child. **41:** 783 (April) 1931; Ugesk. f. læger **93:** 125 (Feb. 5) 1931.
Poulsen, Valdemar; Jensen, K. A., and Husted, E.: The Demonstration of Tubercle Bacilli in Small Children with Pulmonary Tuberculosis, Am. J. Dis. Child. **37:** 900 (May) 1929.
Wallgren, Arvid: Acta pædiat., XI, 191, 1930; Tubercle Bacilli in Children with Erythema Nodosum, Am. J. Dis. Child. **41:** 816 (April) 1931.

Glaucoma.—Glaucoma is not a disease peculiar to the eye. Hypertension in the semicircular canals occurs in certain labyrinth diseases. But one must generalize still further and consider glaucoma as a syndrome which is found also in intracranial hypertension. When I speak of intracranial hypertensions I mean especially those which are associated with tumors of the brain. These are secondary cerebral glaucomas comparable to those secondary glaucomas known in the eye. One meets also with intracranial hypertensions in the course of meningitis and encephalitis. These resemble the glaucomas secondary to choroiditis and iridocyclitis. Lastly, in the condition which is designated by the term serous meningitis, a meningitis in which the spinal fluid is chemically normal, the disease evolves in a manner which reminds one strongly of simple chronic glaucoma. Other analogies could be found, but it is unnecessary to carry my point further; these comparisons suffice to show that the eye is but a department of the complete human organism and that ophthalmologists must turn toward general pathology in order to solve the problems which they encounter.—Magitot, A.: The Aqueous Humor in Glaucoma, *Arch. Ophth.* **6:**661 (Nov.) 1931.

Clinical Notes, Suggestions and New Instruments

ACCIDENTAL DIVISION OF THE PANCREAS

Orville Harry Brown, M.D., and Loren C. Barlow, M.D.,†
Phoenix, Ariz.

A man, aged 44, was in an automobile accident, Dec. 25, 1930, in which the car turned over, pinning his trunk at the upper abdominal level between the car and the curbstone. No further details of the accident were obtainable.

The patient was admitted to the hospital about 4:40 p. m., shortly after the accident. He was in a stupor and was hiccuping. He lay in bed on the right side with the arms flexed, so that his hands were in front of his face, and with his knees drawn up. He was restless, slightly groaning. He answered questions dully and hesitatingly in a muffled voice difficult to understand. He complained of stomach pains. He admitted that he had been drinking and said that his car had turned over with him. Further information could not be elicited.

Examination of the scalp gave negative results. The face had two or three superficially abraded areas, each about 20 mm. in diameter. There was no bleeding nor other discharge from the ears, eyes or nose. He was vomiting a dark tarry mucous material. The nurse said that at first there was a definite alcoholic odor to the vomitus.

The left pupil was definitely larger than the right. Both were moderately contracted. There was no deviation of the eyes. On being requested, he protruded his tongue in the midline.

The facial muscles and lines appeared equal on the two sides. There was no neck rigidity. Tests of expression were impossible.

The neck and the chest showed no abnormality. The heart sounds were of fair quality without murmurs. The size of the heart was about normal. The blood pressure was 96 systolic and 70 diastolic. Once it registered definitely 110/70. An occasional impulse came through higher. The abdomen was flaccid throughout, and palpation of it did not cause any apparent pain. There were two or three slight abrasions on the abdominal wall, each about 25 mm. in diameter. The back was normal except that the buttocks were generally reddish and slightly abraded here and there. The legs seemed normal. The Babinski, Gordon, Oppenheim, Chaddock, patellar and achilles reflexes were all negative.

The diagnosis was alcoholism, concussion of the brain and blood in the stomach, probably having been swallowed from a cut tongue or a bleeding nose.

It was recommended that the patient be kept in bed and carefully watched. Frequent readings of the blood pressure were to be made and the patient examined for signs of internal injury, perhaps of the stomach or intestine. An ice bag was to be placed to the head; instructions were given to wash the stomach if the vomiting continued.

Notes were again taken at 9:30. At that time the pupils were nearly of equal size but were sluggish and a bit contracted. The face and eye movements seemed normal. The abdomen was markedly spastic, almost "boardlike" and tender, probably more on the right than on the left and probably more above the umbilicus than below. The evidence pointed to a ruptured viscus; a rupture of the duodenum or of a connected organ was thought of because of the tarry appearing vomitus. The rigid abdomen was of the type seen in ruptured gastric ulcer or acute pancreatitis.

The patient was taken to the operating room at 10:30 p. m. of the day of the accident and operated on under ether anesthesia. Through a high right rectus incision, a large amount of blood was found in the peritoneal cavity. There was no rupture of the intestine, liver or spleen. The gallbladder was large and full of bloody bile. The lesser peritoneal cavity was more filled with blood than was the greater cavity. The pancreas was found to have been torn crosswise into two about equal parts. The two parts of the pancreas were approximated and sutured together; the bleeding vessels were ligated. A drain was inserted into the lesser peritoneal cavity and the abdomen was closed.

The patient had a mildly stormy course for several days but made a good recovery with a pancreatic fistula. The dressings needed frequent changing, as they absorbed a large amount of the reddish yellow material, later becoming lighter in color. There was considerable skin irritation about the incision even though it was kept covered with petrolatum. The drain was removed gradually after the third day. The patient was discharged from the hospital twenty days after admission. The drainage continued in gradually lessened amounts.

The urine obtained shortly after admission to the hospital contained albumin and an occasional red blood cell. Otherwise it was normal. On the 26th and the morning of the 27th, four specimens of urine contained sugar. Thereafter it was normal. The blood sugar on several examinations was never found abnormal.

The leukocyte count of the blood on the 26th was 13,700, with 79 per cent polymorphonuclears and 21 per cent mononuclears.

About May 1, 1931, he entered the United States veterans' hospital at Whipple, Ariz. Dr. Gail D. Allee, medical officer in charge, reported, October 16, that practically the only treatment that he received while in the hospital was the keeping of the sinus open in order that free drainage might be established. This secretion was sent to the laboratory on several different occasions, but it was not possible to demonstrate the presence of pancreatic fluid.

May 6, the sinus had been injected and a roentgenogram was made which showed the sinus well outlined, with the appearance of being a small cavity about 3½ inches (9 cm.) long by 1½ inches (3.8 cm.) in width.

The patient was discharged, May 25. He was readmitted to this hospital a few days ago, and the sinus had entirely healed and showed no evidence of drainage at this time. However, he complained of epigastric disturbances at the present time, especially following a meal of certain foods.

In January, 1930, Elias L. Stern [1] gave a digest of the literature of traumatic injuries to the pancreas. Four cases were of divided pancreas.

Travers,[2] in 1827, recorded the case of a drunken woman who had a violent contact with the wheel of a coach and was thrown to the ground. She succumbed after several days, and at autopsy the liver was found ruptured and the pancreas torn completely across.

Wilks and Noxon [3] reported a case in which the pancreas was divided into two parts.

Stern further refers to a specimen in the St. Bartholomew Hospital Museum. A person had been crushed between two vans. Death ensued in three days and at autopsy the pancreas was found divided into two nearly equal parts.

Heineke [4] reports the fourth case, in which a man was caught in a fall of earth and sustained a division in the midline of the pancreas. He made a complete recovery. Presumably he was operated on.

Based on Stern's review of the literature, this is the fifth case of complete division of the pancreas through accident, and the second with recovery, to be recorded.

Dr. William K. Fast [5] reported the use of a method of healing pancreatic fistulas, suggested by Caryl Potter [6] for healing duodenal fistulas. This consists of a catheter held in the fistula and packed around with gauze soaked in a 10 per cent aqueous solution of Witte's peptone; through the catheter tenth normal hydrochloric acid is instilled into the fistula, at the rate of 20 minims (1.25 cc.) per hour. A high caloric diet was maintained. He reported that digestion of the wound promptly ceased within twenty-four hours. From the fourteenth to the twenty-first postoperative day the granulating wound was kept covered with beef extract paste. The fistula was entirely healed by thirty days after the operation.

† Dr. Barlow died, June 2, 1931.

1. Stern, E. L.: Am. J. Surg. 8: 58 (Jan.) 1930.
2. Travers, B.: Lancet 12: 384, 1827, cited by Stern.
3. Wilks and Noxon: Pathological Anatomy, eds. 2 and 3, London, J. & A. Churchill, 1875 and 1889, cited by Stern.
4. Heineke, H.: Arch. f. klin. Chir. 84: 1112, 1907, cited by Stern.
5. Fast, W. K.: The Treatment of Pancreatic Fistula Following Rupture of Pancreas, J. A. M. A. 95: 1668 (Nov. 29) 1930.
6. Potter, Caryl: The Treatment of Duodenal Fistula, J. A. M. A. 88: 899 (March 19) 1927, cited by Fast.

We might have obtained early healing of the wound by the use of the Potter technic.

SUMMARY

A case of complete division of the pancreas from an accident without other serious injury is herewith placed on record. This is the fifth case of this type to be recorded and the second patient to recover.

15 East Monroe Street.

Council on Physical Therapy

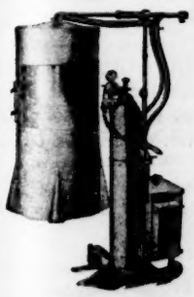
THE COUNCIL ON PHYSICAL THERAPY OF THE AMERICAN MEDICAL ASSOCIATION HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS.

H. A. CARTER, Secretary.

HEIDBRINK MOTORLESS OXYGEN TENT, MODEL 40, ACCEPTABLE

The Heidbrink Oxygen Tent, Model 40, is manufactured by the Heidbrink Company, 2633 Fourth Avenue, Minneapolis. According to the firm, it is recommended for use as an adjunct in the administration of oxygen therapy where a supply of electric current is not available.

The Heidbrink Oxygen Tent, Model 40, consists essentially of a tent with a noninflammable window, an injector, a cabinet, a soda lime container and a supply of oxygen. The entire equipment is mounted on a triangular chassis, the wheels of which are equipped with roller bearings and are rubber tired. The shipping weight is about 230 pounds.



Heidbrink motorless oxygen tent, model 40.

The oxygen-air circulation is maintained by means of the energy of the oxygen under pressure forced through an injector which permits a flow of 6 cubic feet per minute in and through the tent; hence the confined oxygen-rich atmosphere is circulated and recirculated in the relatively closed gas system with the continuous addition of oxygen. A by-pass permits further addition of oxygen when needed.

The firm claims that the humidity is ordinarily maintained at less than 50 per cent and that a cooling at less than 15 degrees below room temperature may be reached.

The Heidbrink Company believes that the Heidbrink Oxygen Tent, Model 40, will provide suitable oxygen as a valuable aid in the early and permanent relief of anoxemia resulting from acute pulmonary edema, coronary thrombosis, cardiac decompensation, pneumonia, and carbon monoxide poisoning.

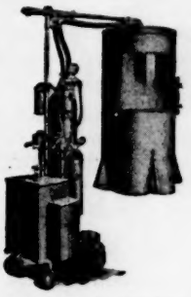
The Council on Physical Therapy declares the Heidbrink Motorless Oxygen Tent, Model 40, acceptable for inclusion in its list of accepted devices.

HEIDBRINK OXYGEN TENT, MODEL 31, ACCEPTABLE

The Heidbrink Oxygen Tent, Model 31, manufactured by the Heidbrink Company, 2633 Fourth Avenue, Minneapolis, is recommended by the firm as a valuable "aid in the early and permanent relief of anoxemia resulting from acute pulmonary edema, coronary thrombosis, cardiac decompensation, pneumonia, and carbon monoxide poisoning."

The Heidbrink Oxygen Tent Model 31 consists essentially of a tent hood, a motor and blower, a soda lime container, a cooling chamber and an oxygen supply tank. The entire assembly is mounted on a chassis and is easily moved from place to place on roller bearing casters. The circulation of the oxygen-air mixture is maintained by a blower connected to a universal type motor totally enclosed to prevent open sparks from coming in contact with the air-oxygen mixture. The firm claims that the apparatus delivers oxygen to the patient, independently and under automatic regulation, in accurately measured quantities as desired, at from 1 to 15 liters per minute. Through an auxiliary valve, from 50 to 60 per cent and higher oxygen concentration may be built up in the tent within a few seconds; hence the oxygen-rich atmosphere is circulated and recirculated in the closed system with the continuous addition of oxygen to the atmosphere.

The motor blower unit is under rheostatic control; thus the volume of flow of oxygen-rich atmosphere through the closed circulating system may be controlled by the attending physician. Cooling of the oxygen-air mixture through the closed circulating system may be controlled by the attending physician. Cooling of the oxygen-air mixture is accomplished by passing the mixture over cracked ice. A temperature reduction of from 15 to 20 degrees F. below room temperature may be secured in the tent. It is claimed that the ice consumption is about 60 to 80 pounds for twenty-four hours. The firm claims that the oxygen-air mixture is deflected to avoid a strong draft directly hitting the patient.



Heidbrink oxygen tent, model 31.

Carbon dioxide is absorbed by soda lime packed in the blower return lead. A wire gauze basket (which holds about a twenty-four hour supply of soda lime) is conveniently located for removal and replacement of the soda lime from the circulation. A by-pass is provided in the circulating system to switch the soda lime in and out while the lime is being replenished. An attachment designed to administer carbon dioxide independently may be obtained, if desired, but is not recommended. The shipping weight is about 230 pounds.

The Council on Physical Therapy declares the Heidbrink Oxygen Tent, Model 31, acceptable for inclusion in its list of accepted devices.

LASTEX SURGICAL STOCKINGS AND GARTER HOSE ACCEPTABLE

Lastex Surgical Stockings and Garter Hose are distributed and sold by Bauer & Black of Chicago.

The firm claims that the stockings and hose are knitted with Lastex yarn. This yarn has a rubber core thread made from Lastex rubber, around which is wound two layers of two-ply silk thread. The resulting yarn looks like silk and is knitted into fashion hosiery just as silk yarn is knitted.

The company claims that the fabric made of Lastex yarn stretches in all directions. The toe, heel and top of a Lastex stocking are made of nonelastic silk and lisle material far more serviceable than that ordinarily found in hosiery.

It is further claimed that the Lastex Stocking and Garter Hose are of light weight and relatively comfortable to the joints, and the pressure around the leg may be regulated by the height to which the garment is pulled. Lastex stockings may be worn without other hosiery, although the average woman will probably wear another stocking over it because of lack of color selection. Lastex is relatively inconspicuous when worn underneath regular hosiery. The firm claims that the Lastex Stocking is designed to be worn by women and the Lastex Garter Hose to be worn either by men or by women who do not need support above the knee. The Lastex stockings come in regular sizes 8½, 9, 9½, 10, 10½ and 11.

The Lastex Stockings and Garter Hose may be used as an adjunct in the treatment of varicose veins. This is the only therapeutic claim that the firm of Bauer & Black makes for the stockings and hose.

The Council on Physical Therapy declares the Lastex Surgical Stockings and Garter Hose acceptable for inclusion in its list of accepted devices.

Indoctrination.—Children throughout the world must learn caution in the face of physical danger, skill in handling themselves and their immediate environment, respect for property, formulae of politeness, and consideration for the comfort of others. The method of teaching varies with different cultures. Nowhere is the process of indoctrination perfectly smooth and untroubled. The degree of conflict and the type of difficulty aroused, however, seem to be correlated with the style of discipline current in the particular society to which the child belongs.—Levy, John: The Impact of Cultural Forms upon Children's Behavior, *Ment. Hyg.* **16**:209 (April) 1932.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, Secretary.

IODOBISMITOL (See THE JOURNAL, Feb. 13, 1932, p. 554).

The following dosage form has been accepted:

Ampules Iodobismitol 2 cc.: Each 2 cc. contains sodium iodobismuthite 0.12 Gm., sodium iodide 0.24 Gm., in ethylene glycol.

METAPHEN (See New and Nonofficial Remedies, 1931, p. 283).

The following dosage form has been accepted:

Tincture Metaphen 1:200: Metaphen 0.5 Gm., dissolved in a liquid composed of acetone 10 cc., water 40 cc., and alcohol 50 cc.

SOLUTION LIVER EXTRACT NO. 343.—A sterile aqueous solution of liver extract No. 343, preserved with 0.3 per cent of cresol. Each cubic centimeter contains the active material derived from 5 Gm. of liver.

Actions and Uses.—Solution liver extract No. 343 is proposed for intramuscular injection in the treatment of pernicious anemia.

Dosage.—Determined by the condition of the patient. Daily intramuscular injection of 2 cc. has been followed by maximal reticulocyte count. The maintenance dose varies with the individual patient.

Manufactured by Eli Lilly and Co., Indianapolis, Ind. No U. S. patent. U. S. trademark 243,147.

Ampoules Solution Liver Extract No. 343, 10 cc.: Each cubic centimeter contains the active material derived from 5 Gm. of liver.

To prepare solution liver extract No. 343, livers from edible animals are ground directly into water, and the mixture adjusted to the isoelectric point (approximately *p*H 5 to *p*H 6). The mixture is then heated to coagulate protein (approximately 80 C.), stirred for thirty minutes, and filtered. The filtrate is reduced in vacuum to a small volume and enough 95 per cent alcohol added to produce a concentration of 70 per cent. The precipitate that is formed is discarded and the filtrate reduced to a small volume; it is added to alcohol and the precipitate separated, dried in vacuum, dissolved in water; 0.3 per cent of cresol is added, and the mixture is filtered, sterilized and filled into ampules.

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS.

W. A. PUCKNER, Secretary.

CALLAWAY'S CREOSOTE, DE-MONO-HYDRATED, NOT ACCEPTABLE FOR N. N. R.

According to the label, "Callaway's Cresote, de-mono-hydrated," is "A 2½% aqueous solution of Beechwood Creosote U. S. P., from which the mono-hydric phenols (carbolic acid etc.) have been REMOVED, . . ." In the information sent to the Council by the Creo-Chemical Distributing Co. it is stated that "In the manufacture of this preparation a 2½% Beechwood Creosote U. S. P., is used in an aqueous solution, from which the mono-hydric phenols (carbolic acid etc.) have been removed" and that it "Contains all the elements of Creosote U. S. P., minus the mono-hydric phenols" and that it is colored red by a dye made from certified colors, but no definite statement of the composition was furnished. The firm submitted a report of an analysis made by a firm of analytic chemists which stated that a specimen marked Cre-Cal-Co received from the Creo-Chemical Distributing Company had been analyzed and that the material was found to have been made up of cresol, guaiacol, alcohol and glycerin and to have been free from other phenols. This analytic report bears a note from the Creo-Chemical Distributing Company to the effect that "Cre-Cal-Co" is now presented to the Council under the new name Callaway's Creosote, de-mono-hydrated. According to a Notice of Judgment issued by the Food and Drug Administration of the U. S. Department of Agriculture (THE JOURNAL, April 11, 1931, p. 1251) Cre-Cal-Co was found to consist essentially of small amounts of creosote, traces of salts of calcium, magnesium and sodium, phosphates, chlorides, and sulphates in water colored with a red dye. From these conflicting statements it is evident that a frank declaration of composition has not been made.

No information was furnished the Council in regard to the method by which the claimed elimination of phenol (carbolic acid, etc.) is accomplished, nor were tests furnished which could be used to demonstrate the absence of phenol. According to the label for Callaway's Creosote, de-mono-hydrated, the removal of the monohydric phenols (carbolic acid, etc.) from the creosote eliminates "all harmful ingredients, without impairing its medicinal properties, permitting therefore of unusually large dosage to obtain quick constitutional saturation." It is claimed that with this preparation "noticeably effective results in the treatment of lung infections" have been obtained in a remarkably short time. In the information sent the Council it is asserted that the preparation is "indicated in the treatment of a series of diseases, starting from a severe cold to pneumonia and influenza." It is stated that in "the treatment of tuberculosis and especially in a number of serious, third stage cases" there is "unquestioned evidence of definite improvement." It is also claimed that the product "has shown remarkable efficacy in the treatment of diphtheria, scarlet fever, venereal diseases and erysipelas (internal plus topical)" and the firm believes that "it is fair to assume the practicing physician may find it of value in the treatment of many other germ diseases, perhaps in cholera, small pox and others." No evidence was submitted in support of these sweeping recommendations, nor was any evidence offered in support of the claim that the removal from the official creosote of any monohydric phenols that may be present permits the administration of unusually large doses of creosote.

Callaway's Creosote, de-mono-hydrated, is unacceptable for inclusion in New and Nonofficial Remedies because it is a preparation of indefinite composition offered with unwarranted claims under a proprietary name which is not descriptive of its composition.

PEPTO-SALICYLAS COMPOUND NOT ACCEPTABLE FOR N. N. R.

Pepto-Salicylas Compound is stated by the proprietors, the Curtis Pharmacal Company, Denver, to be "a mixture containing in each fluid ounce Salicylic Acid, thirty grains,—Phosphate of Iron,—eight grains, Phosphate of Soda, one hundred and five grains,—Pure Pepsin, six grains, and Colchicine one sixty-fourth grain, in aqueous solution, with one minim Fluid Cardamon Compound to the ounce as flavoring." The label on the trade package declares the amount of salicylic acid that is in the mixture but does not declare the amounts of any of the other ingredients.

The proprietors state that Pepto-Salicylas Compound is a "Uric Acid Solvent and Eliminant" and that the mixture is indicated in the treatment of "rheumatism fever, muscular and articular rheumatism, and for pain attending Arthritis." According to the label the mixture is "an agreeable and promptly efficient preparation of TRUE SALICYLIC ACID, in which proper combination and accurately balanced proportion obviate the gastric irritation usually encountered" and the mixture is stated to be "An eligible Vehicle for the Iodides." There is no reason to believe that the several components of this mixture will mitigate in any way the characteristic effects of salicylic acid when administered in the form of sodium salicylate: on the contrary, the other ingredients are a hindrance to the intelligent use of salicylates and the combination of colchicine with salicylates is irrational. The statement that this complex mixture is "an eligible vehicle for the Iodides" is an unwarranted recommendation for the administration of this salicylate preparation as a routine when iodides are given. As a vehicle for the administration of iodides there is nothing superior to an abundance of pure water as a diluent.

The Council finds Pepto-Salicylas Compound unacceptable for New and Nonofficial Remedies because it is a complex, unscientific mixture marketed with unwarranted claims under a name not descriptive of its composition, and without a declaration on the label of the amounts of the potent ingredients other than the salicylic acid claimed to be present, which are contained in it.

Committee on Foods

THE FOLLOWING PRODUCTS HAVE BEEN ACCEPTED BY THE COMMITTEE ON FOODS OF THE AMERICAN MEDICAL ASSOCIATION FOLLOWING ANY NECESSARY CORRECTIONS OF THE LABELS AND ADVERTISING TO CONFORM TO THE RULES AND REGULATIONS. THESE PRODUCTS ARE APPROVED FOR ADVERTISING IN THE PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION, AND FOR GENERAL PROMULGATION TO THE PUBLIC. THEY WILL BE INCLUDED IN THE BOOK OF ACCEPTED FOODS TO BE PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION.

RAYMOND HERTWIG, Secretary.

PORTOLA BRAND CALIFORNIA TUNA

(Extra Fancy) (Packed in High Grade Salad Oil)

Manufacturer.—K. Hovden Company, Monterey, Calif.

Description.—Canned cooked light meat of Yellowfin Tuna with added salt, refined cottonseed oil and sour pickle.

Manufacture.—Tuna fish are harvested from 300 to 500 miles off the coast of Mexico. For this brand, small (15 to 60 pounds) Yellowfin Tuna only, the most solid and tasty of the tuna species, is used. The fish are packed in ice immediately after catching and kept in refrigerator ships until delivered to the factory. All fish are inspected by the state board of health inspectors before they are taken into the plant. The inspected fish are eviscerated, washed with brushes, laid in baskets, cooked in closed cookers under pressure for three to five hours, cooled, brought to a cleaning table, cleaned, boned, cut into quarters, the brown meat is scraped away and the light meat only is used. The light strips of meat are carefully laid into trays, cut into chunks of proper size by a perforating machine to fit the cans and placed in cans, effort being made to retain the chunk in one piece. A proper quantity of salt, refined cottonseed oil and a piece of sour pickle are added on the bottom and top of the can. The cans are sealed and heat processed in retorts under the supervision of the state board of health both as to temperature and as to length of time of heating.

Analysis (submitted by manufacturer).—

(analysis of entire can)	per cent
Moisture	55.1
Ash	2.3
Chlorides as sodium chloride	1.4
Fat (ether extract)	17.9
Protein (N × 6.25)	24.6
Glycogen	trace
Crude fiber	0.02
Carbohydrates (by difference)	0.1
Iodine (I)	0.0001

Calories.—2.6 per gram; 74 per ounce.

Claims of Manufacturer.—These California tuna are for all table uses. A dietary source of iodine.

REPORTS OF THE COMMITTEE

THE COMMITTEE HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

RAYMOND HERTWIG, Secretary.

"SWEANEY'S BUTTER KRUST BREAD" NOT ACCEPTABLE

Sweaney's Bakery, Canton, Ohio, submitted to the Committee on Foods a white bread called "Sweaney's Butter Krust Bread. This bread is prepared by the sponge dough method from patent flour, water, yeast, salt, a yeast food containing calcium sulphate, ammonium chloride, sodium chloride, and potassium bromate, sucrose, lard, sweetened condensed skim milk and a hydrolyzed starch.

Analysis (submitted by manufacturer).—

	per cent
Moisture (entire loaf)	36.0
Ash	1.2
Fat (ether extraction method)	1.0
Protein (N × 6.25)	9.4
Crude fiber	0.1
Carbohydrates other than crude fiber (by difference)	52.3

Discussion of Name and Label Statement.—The name "Sweaney's Butter Krust Bread" indicates either that the baking formula contains sufficient milk-fat or butter or that the bread crust has been specially treated with butter to impart to it a distinctive and characteristic butter flavor. Butter, however, is not an ingredient of the bread; furthermore, skim-milk and not whole milk is used in the baking formula. Neither the bread nor the crust has any detectable characteristic butter flavor. The name is considered inappropriate for the bread, and is misinformative and misleading.

The label statement "Is made with milk" is incorrect in that skim-milk and not milk is an ingredient; further, the statement implies that milk is used in place of water in the preparation of the bread dough, making the product a "milk bread," which is misleading.

The manufacturer when informed of this opinion expressed himself as unwilling to change the name or correct the label statement in accordance with the Committee's recommendations. This bread therefore cannot be listed among the Committee's "accepted" foods.

GENERAL COMMITTEE DECISIONS

THE COMMITTEE ON FOODS AUTHORIZES THE PUBLICATION OF THE FOLLOWING GENERAL COMMITTEE DECISIONS ADOPTED FOR ITS OWN GUIDANCE AND FOR THAT OF FOOD MANUFACTURERS AND ADVERTISING AGENCIES ON FOOD ADVERTISING.

RAYMOND HERTWIG, Secretary.

TESTIMONIALS OF A MEDICINAL OR THERAPEUTIC CHARACTER IN FOOD ADVERTISING

Testimonials of a "health," medicinal or therapeutic character, or with such implication, in food advertising by persons unqualified to express a scientific authoritative opinion or judgment on the subject of the testimonial are misleading or deceptive and are not permissible. Testimonials accompanied by the writer's name and used with his permission will be considered as to their acceptability in individual instances.

ACADEMIC TITLES "DOCTOR" AND "M.D." AS INTEGRAL PARTS OF NAMES OF FOODS

Names of foods including the academic titles "Doctor" or "M.D." accompanied or unaccompanied by the name of a person lend themselves to misleading or deceptive advertising of a medicinal, quasimedicinal or therapeutic character and are not permissible. No objection will be taken to such names for products that have been on the market at least ten years before the institution of this rule (April 15, 1932).

SUPERLATIVE AND COMPARATIVE CLAIMS

Objection will not be made to superlative and comparative claims without specific scientific or technical significance and which are overtly recognizable as without definite meaning provided they are not deceptive or misleading. Statements expressing or inferring exactness of comparison which is not scientifically or technically warranted or in accord with fact are not permissible.

"One of the best" instead of *"the best"*; *"an ideal"* instead of *"the* ideal"; *"one* of *the* richest" instead of *"the* richest"; and similar forms of expression exemplify possible acceptable claims in instances in which the specific superlative statement is not permissible.

THE CLAIM "RECOMMENDED BY PHYSICIANS" AND EQUIVALENT STATEMENTS

The claim "recommended by physicians" and statements of similar import in food advertising are vague in meaning, usually assumed, have no factual significance, convey misleading implications of nutritional or therapeutic values, and therefore are not allowable. Proper and correct recommendations by food manufacturers for specific uses of their products or signed statements based on specific studies by recognized authorities are permissible.

AMBIGUOUS AND INCORRECT USE OF THE TERM "ADEQUATE" IN FOOD ADVERTISING

The term "adequate" in connection with vitamin, mineral or other nutritional claims in food advertising shall be used with its correct scientific significance. The term is permissible only in connection with definite and stated quantities of food containing the adequate quantity and then only when the claim for adequacy is supported by established knowledge.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, MAY 28, 1932

RATE OF HEALING OF BONE FRACTURES

The inevitable wear and tear to which the organism is subjected during life raises the mechanisms of defense and the processes of repair to a position of great importance. Attention has been called repeatedly to the details of such activities as the clotting of blood, the regeneration of nerves, the healing of superficial wounds and the restitution of functional hepatic tissue. Not only has the process itself been described, but factors that facilitate or retard it have been studied. Thus, much attention has been directed to the importance of sterility in the healing of wounds and, during recent years, the influence of diet has been extensively investigated. In view of the increase of accidental injuries correlated with modern life, it is not surprising that studies of the reparative processes in the body have found application in the clinic. It should not be overlooked, however, that much of the finer detail and relationships of the mechanisms of repair have been worked out through the use of experimental animals in the laboratory. In a recent study, McKeown, Lindsay, Harvey and Howes[1] have determined the rate of healing of fractures and certain related factors.

In this investigation, particular care was used to maintain the experimental animals (albino rats) under uniform dietary conditions. In one group the fibula of the right hind leg was fractured and allowed to heal. At stated intervals these rats were killed and the breaking strength of the callus was determined. This was compared to the breaking strength of the intact left fibula of the same animal as well as to that of the fibula of control animals without preliminary fractures. It was observed that the breaking strength of the fibula of the control rats was directly correlated with the length of the bone and with the body weight of the animal. The food intake and body weight of this control group decreased slowly in the course of the study and there occurred a diminution in breaking strength of the intact fibula, which roughly paralleled this decrease. Since the length of the experimental period was only forty-five days, it appears that the observed tendency of the breaking strength to decrease was associated with nutritive condition rather than with age.

The diameter of the callus of the broken bone, as seen in roentgenograms, increased progressively from the sixth postoperative day to the fifteenth. Apparently during this time salts were being laid down in the callus, although the depositions were noticeably irregular. At the same time there occurred a decalcification of the fractured surfaces. The breaking strength of the callus increased sharply to the fifteenth day, then decreased to the twenty-first day, and finally showed an increase to the forty-fifth day. Histologic examination of the callus indicated that the period of weakness between the fifteenth and the twenty-first day was associated with the fusion of the ingrowing blood vessels whereby the medullary space is formed. Subsequent thickening of the cortex and reorganization of the callus was correlated with the increased breaking strength after the twenty-first day.

It was further observed that the unfractured left fibula showed parallel variations in breaking strength with those of the callus of the fractured bone. This observation was found true of the breaking strength of the radii of the same rat. Whereas it has been shown that, under stress, the osseous tissue acts as a readily available reservoir for the characteristic mineral salts, it would appear from these studies that, under the particular experimental conditions imposed, there is a general response on the part of the body as a whole to the requirements in a local situation, and that this response is motivated through a mechanism which is not highly selective.

1. McKeown, R. M.; Lindsay, M. K.; Harvey, S. C., and Howes, E. L.: The Breaking Strength of Healing Fractured Fibulae of Rats, Arch. Surg. **24**: 458 (March) 1932.

GRAPES AND URINARY ACIDITY

One of the contributions made by biochemistry during the present century is the demonstration that the reaction of the foods which we eat, that is, their immediate acid or alkaline character, is by no means a dependable index of their behavior in metabolism. Citrus fruits, for example, are acid when tested by the usual methods employed by chemists for this purpose. They exhibit marked acidity toward litmus or many others of the various indicators in current use. This result is due to the well known presence of organic acids, notably citric acid, in such edible products. These acids are, as a rule, oxidized in the body, leaving a residue of basic ingredients to be disposed of. Hence there exists the seeming paradox that an acid food may be potentially alkaline, so far as its behavior in the organism is concerned. On this account it is readily possible to bring about with acid fruit juices metabolic consequences that are quite like those induced by the alkaline sodium bicarbonate. Sodium citrate is a potential alkali in the organism; it is now occasionally used

in place of sodium bicarbonate when there is a desire to induce alkalization.

These now well known reactions have directed attention to the consideration of foods as potentially alkaline or acid. Protein foods and cereals as a rule give rise to acid end-products in the body; fruits and vegetables tend to be potentially alkaline. Milk, "the most nearly perfect food," is intermediate in its effects. True acidosis can therefore be combated by the ingestion of potentially alkaline foods, even though they are naturally acid in reaction; and the reverse is true of alkalosis. The urine of herbivorous animals is normally alkaline; that of carnivorous species is unmistakably acid as a rule. The capacity of the organism to oxidize organic acids in the way referred to is quite remarkable. For example, Blatherwick and Long [1] have reported that even when large amounts of acid orange juice are ingested there is a production of alkaline urine. They state that it was impossible to overreach the organism's ability to oxidize the contained citric acid even though the amounts of orange juice drunk in one day were the equivalent of 48 Gm. of acid. The excess of base in the orange juice in Blatherwick's experiments was sufficient to balance the organic acidity that escaped oxidation and to cause an alkaline urine, as well as a marked depression in the excretion of ammonia.

There are, however, a number of organic acids that occur naturally in foods and are not so readily oxidized. Oxalic acid is an extreme illustration. Benzoic acid and its salts are conjugated in the body with glycine to form hippuric acid. Tartaric acids have been reported to exhibit considerable resistance to oxidation. Grapes are notably rich in tartrates, grape juice forming a familiar source of "cream of tartar." There has accordingly been some doubt as to the behavior of grapes and grape juices from the standpoint of their potential reaction in the body. An elaborate study of this problem has been reported by Saywell [2] from the University of California College of Agriculture at Berkeley. It included observations of persons on a control diet and on the same "basal" regimen supplemented by fresh grapes, fresh natural grape juice, detartrated grape juice, natural grape juice concentrate, concentrate-tartrate mixture, Thompson seedless raisins and Muscat seeded raisins. An increase in the urinary hydrogen ion concentration occurred, ranging from 0.8 to 1.2 p_H units. A decrease in the ammonia excreted and a corresponding decrease in the total acidity were noted. There was an increase of the alkali reserve above the normal for each person. A correlation between the alkalinity of the ash and the physiologic reaction was apparent. Grapes and grape products with the greater alkalinity of ash were associated with a more basic body reaction. An increase occurred in organic acids excreted. This may be explained by the presence in the urine of some incompletely oxidized tartaric acid. The most surprising feature, however, is that considerably more than 90 per cent of the organic acids ingested in grape products, sometimes exceeding 30 Gm. (1 ounce) was oxidized in the body as a rule. The crucial physiologic experiment thus shows that grapes and their derivative products behave like many other fruits in the body. Nevertheless, as 2 Gm. or more of the ingested acids of grapes was often excreted unoxidized, the possible nephrotoxic action of even such small quantities of an incriminated acid cannot be overlooked. Until further evidence is forthcoming, one may therefore question the physiologic advisability of the continued use of large quantities over long periods of time.

1. Blatherwick, N. R., and Long, M. Louisa: Studies of Urinary Acidity: I. Some Effects of Drinking Large Amounts of Orange Juice and Sour Milk, J. Biol. Chem. **53**: 103 (July) 1922; II. The Increased Acidity Produced by Eating Prunes and Cranberries, ibid. J. Biol. Chem. **57**: 815 (Oct.) 1923.

2. Saywell, L. G.: The Effect of Grapes and Grape Products on Urinary Acidity, J. Nutrition **5**: 103 (March) 1932.

SCHÜLLER-CHRISTIAN DISEASE—A DISTURBANCE OF THE LIPID METABOLISM

About forty years ago, Hand discussed in the Transactions of the Philadelphia Pathological Society a peculiar clinical and anatomic picture characterized by xanthomatous lesions of the bones and polyuria. Since the case also presented signs of tuberculosis, he considered the xanthomatous changes tuberculous. Hand's observations were apparently not repeated until more than twenty years later. Then Schüller called attention to sharply defined geographic defects of the skull in young persons, with signs of dyspituitarism. A similar combination was observed by Christian, who outlined a symptom complex consisting of defects of the membranous bones, diabetes insipidus and exophthalmos. Cases more or less related to those described by Hand, Schüller and Christian had been published from time to time under different names and had been interpreted as being granulomatous or blastomatous in nature. With an intuitive feeling for causal relations, Rowland collected this material, grouped together the common features and, basing his analysis on the careful study of two cases in his own experience, established the anatomic background for a disease entity. He demonstrated that osseous defects, dyspituitarism and exophthalmos had a common cause; namely, the formation of xanthomatous lesions in the dura mater and about the infundibulum of the brain. To this osseous form of xanthomatosis the name "Schüller-Christian disease" has been given.

The modern clinical and pathologic-anatomic literature contains many observations which indicate that the xanthoma is really the local manifestation of a disturbed lipid metabolism. Thus, Schüller-Christian disease becomes related to the other well defined disturbances of the lipid metabolism, in particular to Gaucher and to Niemann-Pick disease. According to our present

knowledge the essential difference between the three diseases seems to be the chemical nature of the lipid substance, which is either formed or retained in excessive amounts and becomes deposited in the tissues, especially those with the greatest storing ability (the cells belonging to the reticulo-endothelial system). In Gaucher disease, the cerebroside kerasin is deposited in the liver, spleen, lymph nodes and bone marrow. In Niemann-Pick disease, excessive amounts of phospholipids appear in practically every organ of the body, including the brain. The characteristic lesions of Schüller-Christian disease are rich in cholesterol and cholesterol esters (E. Epstein).

In a recent exhaustive review of the anomalies of the lipid metabolism,[1] Rowland submits a tentative classification of these anomalies which should prove useful for further investigations. He distinguishes between essential or primary disturbances of the lipid metabolism, which include essential xanthomatosis, Schüller-Christian disease, Niemann-Pick disease and Gaucher disease, and symptomatic or secondary disturbances, which are observed in diabetes mellitus, icterus, pregnancy, menstrual anomalies and renal diseases. Though the clinical and anatomic picture of these conditions is well established, much further work is required in order to disclose the nature of the biochemical processes that lead to their manifestations.

1. Oxford Medicine, vol. IV, chapter VII-A, New York, Oxford University Press, 1931.

Current Comment

PARTURITION AND THE POSTERIOR HYPOPHYSIS

The demonstration of the marked physiologic potencies of epinephrine early led many students of endocrine function to the conclusion that the suprarenal medulla is indispensable to life. It was known that in suprarenal disease low blood pressure is often a characteristic symptom; and as epinephrine is extremely potent as a pressor substance, what could be more logical, seemingly, than to assume that the hypotension attending suprarenal destruction is due to a lack of epinephrine from the medulla? However, the hypothesis failed to be supported by the actual experiments. Epinephrine does not supply complete replacement therapy following removal of the suprarenals. Furthermore, there is conclusive evidence that the cortex of the suprarenals, rather than the epinephrine-secreting medulla, is the truly indispensable part of these structures. Removal of the medulla is not necessarily fatal; but loss of the suprarenal cortex results in death unless the newly investigated cortical hormone is supplied. A somewhat similar upset of an attractive hypothesis seems to have been made recently by studies of the posterior hypophysis. The effectiveness of extracts of this structure in strengthening the uterine contractions of parturition are well known to clinicians. The pharmacologic observations have made it seem probable to some observers that the posterior lobe plays an important or even essential part in the initiation and completion of this process. Experimental proof of the liberation of unusual amounts of the oxytocic principle of this lobe, especially into the cerebrospinal fluid at the termination of pregnancy, has even been claimed by a number of investigators. The crucial experiments have been undertaken by P. E. Smith[1] of the College of Physicians and Surgeons at Columbia University. The posterior hypophysis was removed in adult female animals and the effect on parturition noted. The completeness of the ablation was verified by a microscopic examination of serial sections of the pituitary capsule and its contents. In all cases some anterior lobe tissue also was removed, but a sufficient amount remained to maintain normal body growth and sex cycles. Six of these animals were mated and bore litters. Birth occurred at the usual time. The evidence thus shows that at least in the species studied a secretion of the posterior hypophysis is unnecessary for either the onset or the maintenance of the uterine contractions at parturition. Of course, such experiments do not negate the value of the familiar extracts in promoting uterine contractions or the possibility that oxytocic hormones may be supplied by other tissues.

1. Smith, P. E.: The Nonessentiality of the Posterior Hypophysis in Parturition, Am. J. Physiol. **99**: 345 (Jan.) 1932.

GRAVITATIONAL SPREAD OF LOCAL INFECTIONS

The pneumococcus forms an antithrombic substance which facilitates the spread by gravity of infected transudate throughout the lungs. The suggestion that this gravitational spread may be inhibited by intravenous injection of prothrombic agents is made in a recent report of research at the Rockefeller Institute. In order to study the mechanical factors in pneumococcic infections, Goodner[1] inoculated rabbits intradermally well up on the flank with virulent pneumococci; thus he produced a "dermal pneumonia . . . basically similar to the pulmonary lesion." The resulting dermal lesion was characterized by copious edema, the local transudate gradually spreading ventrally as a result of the gravitational factor. By mechanical drainage, from 5 to 10 cc. of the edematous fluid was obtained for serologic study. This fluid was found not only noncoagulable but capable of inhibiting normal blood coagulation. A thromboplastic substance added to the fluid, however, restored normal plasma coagulation. The local injection of the thromboplastic substance was therefore tried and was found to prevent the gravitational spread of the edematous fluid. Hourly intravenous injections with the thromboplastic substance were tried and were found effective in holding the gravitational spread in check. "Within two hours after discontinuation" of this intravenous prothrombic therapy, "the edema fluid began to move ventrally at the usual rate." While Goodner has not yet suggested a clinical application of this method, it seems to open a promising line for further research in experimental laboratories.

1. Goodner, K.: J. Exper. Med. **54**: 847 (Dec.) 1931.

PROCEEDINGS OF THE NEW ORLEANS SESSION

MINUTES OF THE EIGHTY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW ORLEANS, MAY 9-13, 1932

(Concluded from page 1820)

Second Meeting—Tuesday Morning, May 10

The House of Delegates was called to order at 9:30 a. m. by the Speaker, Dr. F. C. Warnshuis.

It was moved by Dr. Arthur J. Bedell, New York, seconded by Dr. J. W. Van Derslice, Illinois, and carried, that the signed attendance slips constitute the roll call of the House.

Dr. William H. Mayer, Pennsylvania, moved that the House dispense with the reading of the minutes. The motion was seconded by Dr. C. S. Gorsline, Michigan, and carried.

Report of Reference Committee on Credentials

Dr. J. D. Brook, Chairman, reported that 149 delegates had filed satisfactory credentials.

The Speaker, hearing no objections, declared that the report of the Reference Committee on Credentials would be received.

Report of Board of Trustees

Dr. Edward B. Heckel, Chairman, presented the following report:

1. Relative to the resolution presented by Dr. Gorsline of Michigan, the Board of Trustees reports that it has been giving every possible aid to the Bureau of Medical Economics in order to enable that bureau to secure and publish information on the subjects mentioned, and that as it becomes apparent to the Board that increased budget and personnel are needed, the Board of Trustees will attempt to provide what is necessary.

2. The Board of Trustees favors the recommendation contained in the resolution introduced by Dr. William R. Molony, California, relative to gathering and publishing in book form the legal decisions published in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION from week to week. The Board feels, however, that these should be provided to the constituent state associations at cost.

3. Relative to the resolution introduced by Dr. Edgar A. Hines, South Carolina, the Board of Trustees reports that careful consideration was given to the matter of reducing the subscription price of THE JOURNAL before Dr. Hines' resolution was introduced as well as on other occasions, and it was not deemed wise or expedient to make any reduction at the present time.

Dr. C. S. Gorsline, Michigan, moved the adoption of the first section of the report, with respect to aid for the Bureau of Medical Economics. The motion was seconded by Dr. B. F. Bailey, Nebraska, and carried.

On motion of Dr. Arthur J. Bedell, New York, seconded by Dr. H. B. Everett, Tennessee, and carried, the second section of the report relative to publication of legal decisions was adopted.

Dr. Wells Teachnor, Sr., Ohio, moved the adoption of the third section of the report concerning reduction in subscription price of THE JOURNAL. The motion was seconded by Dr. B. F. Bailey, Nebraska, and carried.

On motion of Dr. Arthur J. Bedell, New York, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the report of the Board of Trustees was adopted as a whole.

Report of Reference Committee on Legislation and Public Relations

Dr. Grant C. Madill, Chairman, presented the following report:

The meeting of the Reference Committee was held immediately after the adjournment of the morning session, every member of the committee being present.

1. Resolutions introduced through the secretary of the Michigan State Medical Society concerning the effect of doles and federal health and sick benefit appropriations were read and, after discussion, it was decided to approve of securing data bearing on the question and submit such information to the Board of Trustees.

2. The committee then considered the resolution introduced by Dr. Shoulders concerning the Veterans' Hospitalization Act, which elicited free discussion. It was decided to refer the question to the Committee on Legislative Activities and its Auxiliary Committee on Veterans' Legislation.

GRANT C. MADILL, Chairman.
JOHN F. HAGERTY, Secretary.
SOUTHGATE LEIGH.
C. J. WHALEN.
A. A. ROSS.

The first section of the report was adopted on motion of Dr. Madill, seconded by Dr. Albert E. Bulson, Indiana, and carried.

Dr. Madill moved the adoption of the second portion of the report. The motion was seconded by Dr. Arthur W. Booth, New York, and carried.

On motion of Dr. Madill, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the report of the Reference Committee on Legislation and Public Relations was adopted as a whole.

Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. N. B. Van Etten, Chairman, presented the following report:

1. Your Reference Committee on Amendments to the Constitution and By-Laws has carefully considered the proposal of Dr. D. E. Sullivan, New Hampshire, to amend section 2 of article 5 of the Constitution so that the section shall read as follows:

> The House of Delegates is composed of delegates elected by the constituent associations and by the sections of the Scientific Assembly, and of delegates from the medical departments of the Army and the Navy and the Public Health Service and Veterans' Bureau appointed by the Surgeon-General of the respective departments and by the Medical Director of the Veterans' Bureau. The Trustees, the ex-Presidents of the Association and the members of the several councils shall be ex officio members of the House of Delegates without the right to vote, provided that members of the Councils who are also elected delegates may exercise all of the rights of elected delegates.

Under this proposed amendment the Medical Director of the United States Veterans' Administration would be made a member of the House of Delegates.

Your Reference Committee believes that the designation of any one individual, regardless of qualifications, as a member of the House of Delegates violates the democratic principles on which the House of Delegates is organized.

Your Reference Committee further believes that the fact that only 457 of the 1,668 full time physicians who are members of the United States Veterans' Bureau, have membership in the American Medical Association, that only 257 of them are sufficiently interested to become Fellows of the American Medical Association, and that these members are distributed among forty-one constituent organizations, furnishes sufficient reason for denying special representation in the House of Delegates and therefore your Reference Committee disapproves this proposal to amend the Constitution.

2. Your Reference Committee believes that sections 1 and 2 of chapter XI of the By-Laws on membership and Fellowship in the American Medical Association are sufficiently

definite in their provisions concerning dual memberships and that strict observance of these provisions should be insisted on.

3. Your Reference Committee approves the recommendation of Dr. Isaac A. Abt, delegate from the Section on Diseases of Children, to amend section 1 of chapter XIV of the By-Laws by changing the title of the Section on Diseases of Children to Section on Pediatrics, substituting the word "Pediatrics" for the words "Diseases of Children."

N. B. VAN ETTEN, Chairman.
J. W. AMESSE.
JOHN H. O'SHEA.
H. M. JOHNSON.
WALTER F. DONALDSON.

On motion of Dr. Van Etten, duly seconded and carried, the first section of the report disapproving the amendment to section 2, article 5 of the Constitution was adopted.

Dr. Van Etten moved the adoption of the second section of the report. The motion was seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried.

It was moved by Dr. Van Etten that the third section of the report amending section 1, chapter XIV, of the By-Laws be adopted. The motion was seconded by Dr. J. W. Burns, Texas, and carried.

Dr. Van Etten moved the adoption of the report as a whole. The motion was seconded by Dr. Arthur J. Bedell, New York, and carried.

It was moved by Dr. Van Etten that the By-Laws be amended so that the Section on Diseases of Children be now designated "Section on Pediatrics." The motion was seconded by Dr. H. B. Everett, Tennessee, and carried.

Report of Reference Committee on Sections and Section Work

Dr. F. W. Cregor, Chairman, presented the following report:

Mr. Speaker, your Reference Committee on Sections and Section Work, to which was referred the report of the Council on Scientific Assembly, excepting only that portion of the report having to do with amendment to the By-Laws, expresses its appreciation of the Council's program on scientific presentations. Fully understanding the immensity of their task in selecting lecturers of known skill to address the general assembly and the careful elimination of the sensational, we most heartily endorse its work.

F. W. CREGOR, Chairman.

On motion of Dr. Cregor, seconded by Dr. Arthur J. Bedell, New York, and carried, the report was adopted.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. W. F. Braasch, Chairman, read the report of the Reference Committee on the Report of the Secretary, and moved its adoption. On motions, seconded and carried, each section of this part of the report was adopted.

Dr. Braasch read the report of the Reference Committee dealing with the report of the Board of Trustees, consideration of which was postponed until the Executive Session of the House on motion of Dr. Walter F. Donaldson, Pennsylvania, seconded by Dr. William G. Ricker, Vermont, and carried.

Report of Reference Committee on Credentials

Dr. J. D. Brook, Chairman, stated that Dr. J. J. Moore, who is the alternate delegate for Dr. D. J. Davis of the Section on Pathology and Physiology, presented no credentials whatever, but had been certified to by Dr. West. He moved that the House of Delegates seat Dr. Moore. The motion was seconded by Dr. William H. Mayer, Pennsylvania, and carried.

The Surgeon General's Library

The Speaker introduced Gen. R. U. Patterson, Surgeon General of the United States Army, who addressed the House as follows:

Mr. Speaker, Members of the House of Delegates of the American Medical Association:

I am here today through the courtesy of the officers of your House of Delegates for the purpose of bringing to your attention the action of this body last June in Philadelphia, which, if it remains on your records unchanged, will result in doing a great injury to the medical education program of the Medical Department of the Army, and also will have an effect which you do not desire on the medical profession of the country itself. Without any further preliminaries, and knowing that your time is valuable, I will go into the matter as briefly as possible.

The Army Medical Library, commonly called the Surgeon General's Library, was started by Surgeon General Lovell in 1818. It never amounted to very much until after the Civil War. At the time of the Civil War there were some 500 or 600 volumes in the whole Army Medical Library. However, at that time the Surgeon General, General Barnes, allocated $80,000 of unallocated funds to the library for the purchase of books. The late distinguished and versatile medical man Colonel John S. Billings became librarian of the Surgeon General's Library, and under him it had an unprecedented growth and became one of the great libraries of the world. In the early eighties, $200,000 was expended on the present buildings in which the library and the museum of the Army are located.

There has always been plenty of advice available to the Surgeon General of the Army and the librarian of the library to assist them in the best policies and plans to follow out in the development of that library. I may say that while it should never be done officially without an act of Congress, the present Surgeon General, and I am sure all those who follow him, fully intend to seek the best advice that can be obtained in this country from those who are familiar with libraries, and with medical libraries in particular, and it is my intention to have what will be always an unofficial committee, but nevertheless a most effective one, to guide us and help us whenever we need counsel.

There are today some 409 incunabula and some 260 other rare books, all prior to the year 1525. The present contents of the library are 333,202 bound volumes, 47,171 unbound volumes, and 509,304 pamphlets; that is, there were on April 29 of this year a total of 889,677 publications in the Surgeon General's Library.

In 1879 the Surgeon General's Library began to publish what was known as the *Index Medicus*. Through lack of funds in recent years it was turned over in 1927 to the American Medical Association, which now publishes it as a part of the *Quarterly Cumulative Index Medicus*. In 1880 the compilation of the *Index Catalogue* was begun by the library and has been continued ever since. They have just completed the ninth volume of the third series of this catalogue. The tenth is about to be published. The last one cost some $22,107 and a few odd cents. The next volume will be more costly and will embrace in it information that has never been placed in one volume; it has been scattered heretofore in the whole series as they were published. Hereafter, though, in the tenth volume you will find listed by name all the incunabula and the rare books.

At the present time the Surgeon General's Library, I believe, is the largest collection of medical works in the world. There is a question about that; we are not sure that the library in Paris may not have more volumes, but they don't know themselves what they have got.

The Medical Department of the Army has always recognized, since its inception, the idea of an army medical library as a national asset and as a trust held by them for the whole profession of the country. However, in that connection it is proper to mention the fact that the Medical Department of the Army was in existence for seventy-odd years before we had an American Medical Association, and that the library was started thirty-five years before the American Medical Association was actually organized in 1847. I simply throw that out as an indication of the fact that we started it and have taken care of it for 112 years.

There has always been an earnest desire on the part of everybody in the Medical Department to make that library useful not only to the profession in this country but to the world. Previous to the war we didn't have a very liberal policy. Our policy was that of most libraries, particularly the Library of Congress; books were not sent out. Men had

to come to Washington and consult the works in the library itself, but a much more liberal policy was started during the war and it has become a lending library in its principal activity. For instance, during the last year more than 11,000 volumes were sent out to some 308 libraries throughout the country, so that anybody who wants to get a book does not need to come to Washington unless he wishes to consult one of the incunabula.

The library is an absolutely essential part of our medical educational system in the Army. It is utilized freely by the officers of the Medical Corps of the Navy, of the Public Health Service, of the Veterans' Administration, and by the physicians who are members of the Medical Society of the District of Columbia.

There has been a complaint made on one or two occasions that the library was not open at night. Gentlemen, it doesn't make a bit of difference whether we have it or the Library of Congress has it, whoever has it can keep it open at night only if there are more funds made available for the employment of personnel. There is a far greater chance of our being able to keep it open without additional expense at the Army Medical Center, where we have lots of enlisted men, than there is of its ever being kept open in any other location in the city of Washington without very much increasing the funds for the employment of personnel.

Congress has repeatedly recognized the value of the library of the Surgeon General's Office.

About thirty years ago, the dean who has just retired from George Washington Medical School, Dr. Boyden, conceived the idea of a great army medical center at the capital of the nation, something better than we have in any country in the world. They made their plans. The idea was to have first a large hospital as the clinic, and then the Army Medical School and the veterinary and dental schools, which, as you know, are postgraduate schools, and then the library and the museum alongside, making a complete institution. Today the essential buildings of the Walter Reed General Hospital have been completed. The Army Medical School and the veterinary and dental schools (and they are very handsome buildings) have just been completed. The Army Medical School has been in operation in its present building since 1923, but these other buildings have been built, the additions have been put on, and it is now complete. The only thing we lack to make the center complete is the Army Medical Library and the Army Medical Museum.

In these times it is hard to predict when we will get that money, but the influence, moral and otherwise, of an association like this can assist us very much in getting that money when the time is ripe in this country.

Last June certain gentlemen were interested in the library, and I know they meant the very best in the world. But I think they did what I consider was an extraordinary thing.

I was in Philadelphia myself at your last meeting and would have been more than willing and glad to have an opportunity to say something on the action that was taken. However, though we were the greatest and the most concerned of anybody, we weren't consulted, and your body passed a resolution which will potentially do us great harm, and the record will prove the fact that the American Medical Association desires to have our library placed somewhere else, where it will do us no good and do you some harm if you are interested in libraries.

I am going to state briefly just what happens if this thing prevails. First of all, that is our library. We originated it. We have cared for it and developed it for a hundred and twelve years, and the present resolution that stands on your books would take that thing away from us and put it up somewhere where we don't want it. It would be exactly as if some of you decided that you would prefer, when you go to Baltimore, to have a library down at the Union Station or at the Mount Royal Station, instead of going two and a half miles, probably, to the Johns Hopkins Hospital and the Medical School where the library is located, exactly near those buildings, where it is available and useful. That is a parallel of what you have unwittingly attempted to do to the Medical Department of the Army. It is the first time in my life, and certainly in my thirty-one years of service, that I have ever seen the American Medical Association apparently opposing something that is necessary to the Medical Department of the Army. It has never happened before, and I know it was not done advisedly.

The Planning and Beautification Committee of Washington is planning to beautify that city. We are in the way. Our location is not satisfactory; it will obstruct it. Furthermore, it is too small.

When the Army Medical School was started in 1893, it was with the Army Medical Museum. The library got too large and so did the museum. Finally we were located in the Army Medical Center, where the school is now. But to put it up in the Library of Congress or adjacent to it will make it necessary to condemn a site at great expense, because it is all built up around there, as you well know. Here we have a site available right across from the Army Medical School, and it has been available since 1922, when Congress, for a second time, appropriated funds for the purpose of purchasing land on which to place the Army Medical Library. Many of you know that place; if you do not, the next time you go to Washington, go up and see the school buildings and the hospital and look at the site immediately across the street. There is no finer site for the library. It is absolutely essential for our purposes. It would just ruin the Army Medical Center if we don't have it there. So much for the expense of the site.

If the building were erected near the Library of Congress it would mean that it must be built in harmony with the architecture of those federal buildings on that hill, a very much more expensive proposition than if it should be located where we want it and where it ought to be. The buildings of the Army Medical Center, as you know, are brick and will cost much less than if we have to put up a granite or stone building at the Library of Congress.

As to accessibility, in these days of travel, figures show that fewer and fewer men are coming and consulting that library in person. Most of those who come drive over in automobiles. If they are coming from the north or west, the Walter Reed is five miles out of the city from the center where it is now, and although the city has grown up all around it, it is still nearer Baltimore than it has ever been. There would be ample parking space there, which could not be provided adequately over near the Library of Congress.

Finally, if your motion remains unchanged, it may result in the plans of thirty years of the War Department being frustrated, and the library, originated, developed and cared for by the Medical Department of the Army, will be practically taken away from it for unjustifiable reasons.

Even if the proponents of this motion had thoroughly realized what they were doing, if they did realize it, and I doubt it very much, the Delegates did not, because that was referred to one of your committees here and it came back, as I understand, as a report of that committee, I think it was the Committee on Education, and the whole thing went through very hastily. I am sure that the House of Delegates did not realize just what it was doing to us.

What harm has been done already, if any? I myself have had to answer many, many letters on account of that action, both for the Secretary of War and the President of the Senate, and I would have for the Speaker of the House only he died, and Mr. Garner has been too busy since he got in Congress, since the House opening, to take any notice of that. But your action plays into the hands of a member of Congress who told me not many weeks ago, and General Ireland, that he is going to take the library away from us anyway. He doesn't care whether it hurts you or hurts the Army. He is not very friendly to the Army and he is going to do it willy-nilly. I imagine he is too busy now, but when he gets a little time on his hands I haven't any doubt that he will try to put that through Congress. So long as your action remains unchanged, you are playing right into his hands, and you will be doing a hurt that you never intended to do.

Mr. Putnam, the librarian of Congress, has said distinctly that he doesn't want it, that it will be uneconomical. He doubts whether the efficiency will be increased, and that for many reasons it should be retained as a specialized library,

just as the Department of Agriculture library and the library of the Geological Survey, and there is another bureau in Washington that has an entirely independent library.

Since your action of last June I have had many expressions of regret from the groups in Baltimore, in Boston and in Philadelphia. I received a resolution dated Nov. 28, 1931, from the Mayo Library Committee, approved by the Board of Governors of the Mayo Foundation, in which they deplored very much that you had taken the action you did.

Finally, the members of the District of Columbia Medical Society, who were familiar with the library, passed a resolution, Jan. 6, 1932, in which they deplored such action and advocated that no such action be taken as was contemplated by the resolution passed by the House of Delegates last June.

That resolution went through hastily. As long as it remains on your records it has potential power to do us injury, which I know you do not intend to do. I hope that some one will get up and move for a recession or rescinding of the action that you took last June, as it will do us a great deal of help. I feel confident I can ask this great body to be ready to stand behind the Medical Department of the Army if it becomes necessary to combat, I may say, certain malign influences in Congress; I might say one influence; that is the only one whose plans will harm us seriously, and if they carry through will do you harm. Don't make any mistake that if it becomes incorporated into the Library of Congress you will never be able to get books from it. You will have to go to the library to see them.

I hope you will take action in this very body at this time. In conclusion, I wish to thank you for giving me this opportunity and also to say that I appreciate very much your patience in listening to me.

The Speaker referred the remarks and the request of General Patterson to the Reference Committee on Medical Education for consideration and recommendation, after discussion by Dr. H. G. Stetson, Massachusetts, Dr. Thomas S. Cullen, a Trustee, Dr. C. B. Wright, Minnesota, and Dr. W. R. Steiner, Connecticut.

Resolutions on Site of Surgeon General's Library

Dr. Wright presented the following resolutions, which were referred to the Reference Committee on Medical Education:

WHEREAS, At the Annual Convention of the American Medical Association held at Philadelphia in June, 1931, the House of Delegates passed a resolution advocating that when the Army Medical Library has to be moved to a new site it be placed adjacent to the Library of Congress; and

WHEREAS, At that time the House of Delegates did not have before it complete information concerning this status of the Army Medical Library and the plans of the War Department with respect to the Library; and

WHEREAS, That information being now fully available, it is evident that any departure from those plans of many years' standing with respect to the future location of the Army Medical Library will seriously interfere with the proper development of the Army Medical Center in Washington and will also render it less useful to the medical profession of the country as a whole; be it

Resolved, By the House of Delegates of the American Medical Association in convention assembled, that the resolution of the House of Delegates in June, 1931, at Philadelphia, with reference to the location of the Army Medical Library be, and is hereby, rescinded; and be it further

Resolved, That a copy of this resolution be sent to the President of the United States, the President of the Senate, the Speaker of the House of Representatives, and the Secretary of War.

We recommend that the House of Delegates offer its cooperation in obtaining a suitable fireproof building to house these priceless volumes.

Remarks of Dr. T. C. Routley

The Secretary presented Dr. T. C. Routley, secretary of the Canadian Medical Association, who addressed the House as follows:

Mr. Speaker, Mr. President and Gentlemen:

It gives me, indeed, a great deal of pleasure to come here this morning and present to you greetings from the Canadian Medical Association, of which body I have the honor to be General Secretary.

There is a story told up in our country about two railroads, one of which you no doubt have heard, the other I doubt you have heard of. One is called the Canadian Pacific Railway and the other is the Cumberland Railway. The Canadian Pacific Railway has many thousands of miles of rails. The Cumberland Railway is a little organization with five miles of rails.

The president of the Cumberland Railway decided one time that he would like to have a pass over the Canadian Pacific, so he went up to the then president, Sir William Van Horn, and presented his card as president of the Cumberland Railway. Sir William, in inviting him in, said, "I never heard of this railway."

He said, "Sir William, it is not as long as yours but it is just as wide."

The Canadian Medical Association, in stature, is dwarfed beside you, but in its ideals and aspirations for progressive medicine, I trust that it is just as wide. I know that our men always delight in coming to your meetings, and you have always extended to them, as you have to me, a most cordial invitation and a delightful welcome. On their behalf and on my own behalf I desire to thank you.

I hope that some day this great body will see fit to join hands with us and meet in Canada. We would give you a most cordial welcome, indeed.

Report of Reference Committee on Rules and Order of Business

Dr. R. W. Fouts, Nebraska, read the following report of the Reference Committee on Rules and Order of Business:

This report deals with the report of the Judicial Council except that part which was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Your Reference Committee endorses the sentiment expressed in the second paragraph of the Council's report, calling attention to the danger of attempting to overturn some of the older traditions by submitting untried methods of practice and suggests the continuance of this procedure.

Your Reference Committee likewise believes that the present Principles of Medical Ethics is adequate and should be strictly adhered to in dealing with "Patents and Perquisites."

Your Reference Committee calls attention to the incorrect address of Dr. Donald Macrae, Jr., deceased, and in order that the records may be correct, recommends that this be changed to Council Bluffs, Iowa.

Your Reference Committee also recommends that some suitable memorial be devised for those who die during their term of service as officers of the American Medical Association.

Respectfully submitted.

BERTRAM L. BRYANT, Chairman.
R. W. FOUTS, Secretary.

Dr. Fouts moved that the report be adopted. The motion was seconded by Dr. Arthur J. Bedell, New York, and carried.

Report of Reference Committee on Miscellaneous Business

Dr. James R. Bloss, Chairman, read the following report of the Reference Committee on Miscellaneous Business:

1. Your Reference Committee recommends that the Secretary of the Association be instructed to comply with the request of F. V. Cargill that a letter be written to the Woman's Auxiliary expressing the appreciation of the House of Delegates for the activities of the Auxiliary and that the Secretary write the letter as asked.

2. The resolution presented by Dr. W. R. Molony, California, in the opinion of your committee, should be referred to the Bureau of Medical Economics. Your committee recommends that the Bureau of Medical Economics secure the information required by the resolution and that the report of the information requested by the California Medical Association be given at the earliest possible moment.

Respectfully submitted.

JAMES R. BLOSS, Chairman.
H. B. EVERETT.
WILLIAM R. BATHURST.

On motion of Dr. Bloss, seconded by Dr. Randolph Winslow, Maryland, and carried, the report was adopted.

NEW BUSINESS

Resolution on Approval of Standard Classified Nomenclature of Disease

Dr. Frederic E. Sondern, New York, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, A standard classified nomenclature of disease has been compiled by the National Conference on Nomenclature of Disease; and

WHEREAS, The said national conference is composed almost entirely of delegates from national clinical societies and other interested organizations, including a delegate from the American Medical Association; and

WHEREAS, The said Standard Classified Nomenclature of Disease has been prepared through the joint efforts of these delegates and committees appointed by their parent organizations and has been unanimously approved by the assembled delegates; and

WHEREAS, The national conference is now seeking the approval of the nomenclature as published in preliminary form for this purpose, before the publication of an official edition for general use; and

WHEREAS, The official edition will be substantially the same as the preliminary edition, differing from it not in design but only to a small extent in detail; and

WHEREAS, The purpose of the said national conference is to provide a uniform authoritative standard of nomenclature of disease for use throughout the country; and

WHEREAS, The approval of the American Medical Association will materially further this worthy object; therefore be it

Resolved, That the American Medical Association approve the said Standard Classified Nomenclature of Disease and recommend its use as a standard throughout the United States.

Resolutions on Closer Cooperation Between the County Societies and the American Medical Association

Dr. Southgate Leigh, Virginia, presented the following resolution, which was referred to the Board of Trustees:

WHEREAS, The profession is confronted with difficulties that are both serious and urgent; and

WHEREAS, There is pressing need for close and active cooperation on the part of all component societies, as well as the individual doctors; and

WHEREAS, With such earnest cooperation many problems may be readily solved; therefore be it

Resolved, By the House of Delegates of the American Medical Association that the officers and trustees of the Association be instructed to communicate with the various constituent state societies, advising them of the difficulties and suggesting that they take the following steps:

1. To keep in close touch with the national organization.
2. To strengthen the county society units, and as far as possible to arrange for an organization in each county in the state.
3. To continue with renewed energy the work of the various public relation committees in states and counties; and

Resolved, That the delegates from each state society present this matter vigorously and promptly to their respective organizations; and further

Resolved, That the officers and trustees communicate with the Woman's Auxiliary to the American Medical Association, requesting its continued active cooperation with the profession and urging that local auxiliaries be formed in connection with every county society.

On motion of Dr. J. W. Van Derslice, Illinois, seconded by Dr. Samuel P. Mengel, Pennsylvania, and carried, the meeting recessed at 11 o'clock to reconvene at 1:30.

Third Meeting—Tuesday Afternoon, May 10

The House of Delegates was called to order at 1:30 p. m. by the Speaker, Dr. F. C. Warnshuis.

Report of Reference Committee on Medical Education

Dr. Irvin Abell, Chairman, presented the following report:

1. The Reference Committee has fully considered the report of the Council on Medical Education and Hospitals and desires to offer its commendation on the excellence of the amount of work detailed therein.

It is gratifying to note that cooperation of all but one of the acceptable medical schools was secured in publishing a record of the hospital training of their graduates, affording a distinct stimulus to graduate or fifth year education. The discouragement of the graduation of unqualified students is approved. It is suggested that a copy of the graphic chart on page 109 of the Handbook, showing the percentage of "repeaters," be sent to the schools listed therein.

It is further suggested that the resolution of the Council pertaining to the classification of foreign schools be affirmed.

The certification of specialists presents a problem of great practical importance and offers many angles to which the Council is devoting study but on which it is not yet prepared to make recommendations.

It is interesting to note that the number of medical graduates in the United States shows a steady increase, representing about 50 per cent more than the loss by death of the medical profession each year.

The hospital statistics presented by the Council show the results of decidedly active supervision with the resultant desire on the part of governing boards to comply with the essentials for registration and as well of an appreciable number for approval for internships and for residency in specialties; 6,612 are now on the register, while 684 have been approved for internships and 371 approved for residencies in specialties, offering at the present time facilities in graduate training in excess of the demand.

With the view of correlating hospital activities to meet the requirements of today to the end that its benefits may accrue in greatest measure both to the physician and the patient, the Council on Feb. 14, 1932, amended the "Essentials of a Registered Hospital" as adopted by the House of Delegates in 1928 and requests approval of these "Essentials" in the form submitted in supplement A, page 115, of the Handbook. The Reference Committee recommends this approval.

2. The "Essentials of an Approved Clinical Laboratory" were adopted by the Council in compliance with instructions received from the House of Delegates in 1923. For the more practical rating of laboratories, the Council at its February meeting adopted a statement of the "Essentials for the Listing of Physicians Specializing in Clinical Work and Pathology" and requests approval of the House of Delegates for these "Essentials" as submitted in supplement B, page 118, of the Handbook. The Reference Committee recommends this approval.

3. The "Essentials of an Approved Department of Radiology and Roentgenology" were approved by the House of Delegates in 1929. For the more satisfactory classification of such laboratories the Council in February, 1932, adopted "Essentials for Admission to List of Physicians Specializing in Radiology" and requests approval for these "Essentials" as submitted in supplement C, page 121, of the Handbook. The Reference Committee recommends this approval.

4. The following resolution, introduced by Dr. G. Henry Mundt, delegate from Illinois, was considered by the Reference Committee:

Resolved, That it is the opinion of the House of Delegates of the American Medical Association that physicians on the staffs of hospitals approved for intern training by the Council on Medical Education and Hospitals should be limited to members in good standing of the American Medical Association, this ruling to apply to all hospitals except federal, state, county and municipal institutions.

The Reference Committee regards this resolution as an expression of opinion in favor of a standard which should be striven for, and as such approves it, recognizing at the same time that it may not be desirable at present to make it a hard and fast rule.

5. The Reference Committee has considered the resolution introduced by Dr. C. B. Wright, delegate from Minnesota, pertaining to the Surgeon General's Library at Washington, and recommends the adoption of the resolution.

IRVIN ABELL, Chairman.
WILLIAM ALLEN PUSEY.
F. S. CROCKETT.
SEALE HARRIS.
J. F. BURNHAM.

The first section of the report was adopted on motion of Dr. Abell, seconded by Dr. H. B. Everett, Tennessee, and carried.

Dr. Abell moved that the second section of the report dealing with essentials of an approved clinical laboratory, be adopted. The motion was seconded by Dr. Frederic E. Sondern, New York, and carried.

On motion of Dr. Abell, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the third section of the report, referring to essentials of an approved department of radiology and roentgenology, was adopted.

Dr. Abell moved that the fourth section of the report dealing with the resolution introduced by Dr. G. Henry Mundt, Illinois, be adopted. The motion was seconded by Dr. E. P. Sloan, Illinois, and carried.

On motion of Dr. Abell, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the fifth section of the report with reference to the resolution pertaining to the Surgeon General's Library was adopted.

Dr. Abell moved that the report be adopted as a whole. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and carried.

It was moved by Dr. Abell that the motion of the House adopted a year ago, with reference to the location of the Surgeon General's Library, be rescinded. The motion was seconded by Dr. Albert E. Bulson, Indiana, and carried unanimously.

Report of Reference Committee on Reports of Officers

The Vice Speaker, Dr. Albert E. Bulson, took the chair.

Dr. C. E. Mongan, Chairman, presented the following report:

ADDRESS OF SPEAKER

1. The speaker has called attention to the tremendous responsibility resting on the House of Delegates of molding and guiding public opinion and formulating the fundamental principles that will bring about acceptable readjustments wherein all the traditions and achievements of the medical profession will be conserved and its relationship to the patient and public enhanced. We heartily approve of that recommendation and in furtherance further recommend that the Delegates of the House of Delegates of the American Medical Association tender to their state societies at the annual meeting a full report of the transactions of the House of Delegates of the American Medical Association.

2. The Speaker stressed the point that all persons presenting resolutions to the House of Delegates should appear before the Reference Committees considering the resolution introduced and give reasons for its adoption, so that the Reference Committee should have full information concerning the offering of the resolution; and, further, those members who are opposed to resolutions offered in the House of Delegates should also appear and give argument sustaining their objections. Unless this procedure is followed, a Reference Committee cannot render to the House of Delegates an intelligent and comprehensive opinion.

3. In order that the Tuesday afternoon executive session shall not aimlessly concern itself with irrelevant matters, your Speaker recommends that you authorize your Secretary, Chairman of the Board of Trustees and Speaker to formulate a program of pending questions that the year's activities and experience indicate as meriting executive consideration. We recommend the adoption of that portion of the Speaker's address.

ADDRESS OF PRESIDENT

4. In the portion of the President's address which relates to the study of economics, he says: "It seems to me that a new committee might be formed, or that some member of a permanent staff might be delegated to cooperate with the Bureau and Councils for the purpose of further study of some of the plans in European countries and any new plan suggested. I am not at all sure how much change, if any, should be in our present plan, but I do think that if there were a committee working on these problems for possibly the next five years, it might be able to suggest some changes that would help solve problems in this country."

Your committee suggests that the study of medical economics deserves careful consideration and has already been studied by the Bureau of Economics and by the Committee on the Costs of Medical Care.

If it seems desirable that a permanent committee be appointed to study these problems in European countries and in our own country, as suggested by the President, we recommend that this committee be appointed by the Board of Trustees and that the committee cooperate with the Bureau of Medical Economics in the study of these problems.

5. We have given consideration to that portion of the President's address in which he says "There has been a tendency in some specialties and in certain communities to turn over certain cases to nurses, midwives or technicians. So far as I can see, there is no way to make the conscientious practice of medicine an easy task. And, furthermore, it has been asserted repeatedly that there are too many physicians. Although I do not believe that there are too many physicians, nevertheless, I do think that in order to give the people the best care, the actual practice of medicine must be kept in the hands of physicians."

We heartily endorse that statement in the President's address on the principle that all medical work be done by medical men.

6. We especially call attention of every member of the House of Delegates to the President's comment on "graduate training." This part of his address is too long to incorporate in the report, but it should be the conscientious duty of every member of the House of Delegates to read, consider and assimilate the good that is contained in these paragraphs. We heartily recommend the President's opinion on graduate training.

Concerning the President's comment on "specialization," we suggest the importance of the study of the question of proper classification and regulation of specialists. Last year, the House of Delegates requested the Council on Medical Education and Hospitals to investigate the subject of specialization, and we are awaiting their report on this subject.

ADDRESS OF PRESIDENT-ELECT

7. With reference to the President-Elect's comment on the development of a nation-wide scheme of postgraduate medical instruction by the Council on Medical Education and Hospitals, we realize the importance of postgraduate medical instruction and recommend that the Council on Medical Education and Hospitals of the American Medical Association promote this work by urging the state medical societies to conduct regional clinical meetings, and that the Council endeavor to provide, as far as possible, suitable information regarding material for such instruction.

8. In regard to the President-Elect's comment on a new building for the Association, we understand that the careful consideration of the erection of a new building is in the hands of the Board of Trustees and we may well await the result of their deliberation.

C. E. MONGAN, Chairman.
W. R. STEINER.
W. A. COOK.
J. F. SMITH, Secretary.

Dr. Mongan moved that the first section of the report, urging the delegates to render a full report of the transactions of the House to their respective state associations, be adopted. The motion was seconded by Dr. Joseph F. Smith, Wisconsin, and carried.

On motion of Dr. Mongan, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried, the second section of the report, urging persons who present resolutions in the House to appear before the reference committees to which the resolutions are referred, was adopted.

It was moved by Dr. Mongan, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried, that the third section of the report, referring to the executive session, be adopted.

Dr. Mongan recommended that the fourth section of the report be referred to the Board of Trustees, as it might entail the expenditure of money. Without further action the Vice Speaker referred this section of the report to the Board of Trustees.

The fifth section, endorsing the statement of the President that all medical work be done by medical men, was adopted on motion of Dr. Mongan, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried.

Dr. Mongan moved that the sixth section of the report, dealing with graduate training, be adopted. The motion was seconded by Dr. E. P. Sloan, Illinois, and carried.

Dr. Mongan moved that the seventh section of the report, dealing with postgraduate medical instruction, be adopted. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and carried.

Dr. Mongan moved that the eighth section of the report, with reference to a new building, be adopted. The motion was seconded by Dr. Joseph F. Smith, Wisconsin, and carried.

Dr. Mongan moved the adoption of the report as a whole, excepting the portion that was referred to the Board of Trustees. The motion was seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried.

Executive Session—Tuesday Afternoon, May 10

The Speaker resumed the chair and on motion of Dr. Mather Pfeiffenberger, Illinois, seconded by Dr. H. B. Everett, Tennessee, and carried, the House went into executive session at 1:50.

Report of the Special Committee on Legislative Activities

Dr. C. B. Wright, Chairman, presented the following report:

I. Pursuant to the action of the House of Delegates in Philadelphia in 1931, the Board of Trustees, on the recommendation of the Committee on Legislative Activities and the General Manager, Dr. West, appointed an Auxiliary Committee on Veterans' Legislation to act with the Committee on Legislative Activities. This committee consists of the following members:

Dr. Otho A. Fiedler, Sheybogan, Wis.
Dr. Angus McLean, Detroit.
Dr. H. H. Shoulders, Nashville, Tenn.
Dr. E. A. Meyerding, St. Paul.
Dr. F. S. Crockett, La Fayette, Ind.
Dr. Holman Taylor, Fort Worth, Texas.

A combined meeting was held on Sept. 4, 1931. At this meeting the following were present:

Chairman, C. B. Wright.
Dr. J. H. J. Upham.
Dr. D. Chester Brown.
Dr. E. H. Cary.
Dr. Angus McLean.
Dr. H. H. Shoulders.
Dr. E. A. Meyerding.
Dr. F. S. Crockett.
Dr. Otho A. Fiedler.
Dr. Olin West.
Dr. Morris Fishbein.
Dr. William C. Woodward.

Methods of carrying out the instructions of the House of Delegates were discussed and the resolution submitted to the House of Delegates by Dr. H. H. Shoulders was carefully considered.

Following this meeting, Dr. Barrett, a former commander of the Wisconsin State Legion, attended the National Convention of the American Legion in Detroit. At Minneapolis Dr. E. A. Meyerding and the chairman arranged a meeting with Mr. E. V. Cliff, Minnesota member of the National Executive Committee of the American Legion. At this meeting the suggestion was made that a committee from the American Legion and one from the American Medical Association talk over the situation.

SECRETARIES' CONFERENCE

At the annual conference of state secretaries and editors of state journals in November, 1931, these committees had a second meeting. Following this meeting Dr. Barrett (through the influence of Dr. Fiedler) attended the meeting of the Executive Committee of the American Legion, then in session in Indianapolis.

Immediately following the secretaries' conference, Dr. West was informed by telephone that representatives of the American Legion would be glad to meet with the representatives of the American Medical Association in Indianapolis.

INDIANAPOLIS CONFERENCE

The Indianapolis conference was held on Nov. 19, 1931. Those attending were:

Representing the American Legion: Mr. Watson B. Miller, chairman of the Rehabilitation Committee of the Legion; Mr. John A. Hartman, National Liaison Officer; Mr. E. V. Cliff, and Mr. E. A. Hayes, members of the Executive Committee of the Legion, and Dr. Edward W. Thompson, president of the Indiana Hospital Association.

Representing the American Hospital Association: Mr. Paul H. Fesler, president.

Representing the American Medical Association: Dr. Olin West, Dr. H. H. Shoulders, Dr. F. S. Crockett, Dr. Otho A. Fiedler, Dr. E. A. Meyerding and Dr. C. B. Wright.

The Shoulders resolution was fully discussed and points of view on veterans' care were fully presented by the various groups. The result of this conference was a better understanding and a desire on the part of every one to continue the discussion. This resulted in the Chicago conference.

CHICAGO CONFERENCE

The Chicago conference was held at the headquarters of the American Medical Association on Dec. 30, 1931. There were in attendance, in addition to our committee, members of the Board of Trustees, Dr. Olin West, Dr. Morris Fishbein and Dr. William C. Woodward of the American Medical Association; Mr. E. A. Hayes, Mr. E. V. Cliff and Capt. Watson B. Miller, representing the American Legion; Mr. Paul H. Fesler (president) and Dr. Bert W. Caldwell (executive secretary) of the American Hospital Association; Dr. Martin Cooley, representing the United States Veterans' Administration; and a number of others from the various organizations who were interested in this subject.

This was a round table discussion of all aspects of veterans' care, and the representative of the Veterans' Administration spent a great deal of time discussing the subject from their standpoint. Again the Shoulders plan was very thoroughly presented.

A tentative basis of agreement was suggested by Dr. E. H. Cary and passed, as follows: (1) That the hospital building program should stop, except for the erection of hospitals for the care of patients suffering from nervous and mental diseases and tuberculosis, and all building plans should be modified as far as possible to meet the future needs of the civilian population by location and distribution; (2) that a modification of veterans' legislation should be asked, allowing that veterans be taken care of in the nonfederal hospitals at home and that all acute medical surgical conditions should be so cared for. All in attendance were urged to consider carefully this tentative agreement and as far as possible obtain reactions from their own organizations.

Mr. Miller then proposed that the representatives of the American Medical Association, American Hospital Association, Committee on Rehabilitation, Veterans' Administration and American Legion confer in Washington at a date to be determined later. This proposal was accepted.

WASHINGTON CONFERENCE

Sunday evening, Jan. 31, 1932, we had a preliminary meeting with the representatives of the American Hospital Association at the Mayflower Hotel in Washington.

On the morning of Feb. 1, 1932, we met with the Rehabilitation Committee of the American Legion. About 120 representatives of the Legion from all parts of the country were present. Dr. Shoulders explained his plan to this group and Mr. Fesler presented the resolution passed by the American Hospital Association in Toronto, urging the use of nonfederal hospitals for the care of veterans.

The same afternoon we attended a conference in the board rooms of the Veterans' Administration under the chairmanship of Dr. C. M. Griffith, medical director of the Veterans' Administration.

The representatives of the various groups present were:

Medical Advisory Council of the Veterans' Administration:
Dr. L. F. Barker, Baltimore.
Dr. Kennon Dunham, Cincinnati.
Col. W. F. Lorenz, Madison, Wis.
Dr. L. I. Dublin, New York.
Major Gen. R. U. Patterson, Surgeon General of the Army.

American Hospital Association:
Col. F. A. Washburn, Superintendent, Massachusetts General Hospital.
Dr. S. S. Goldwater, New York.
Dr. N. W. Faxon, Rochester, N. Y.
Dr. N. R. Kneifi, St. Louis, Catholic Hospital Association.
Mr. Paul H. Fesler, Minneapolis, president of the American Hospital Association.

American Legion:
Mr. E. A. Hayes, Illinois.
Mr. E. V. Cliff, Ortonville, Minn.
Capt. Watson B. Miller, Washington, D. C.
Dr. William M. Leffingwell, New York, represented by
Dr. H. D. Shapiro, Washington, D. C.

American Medical Association:
Dr. E. H. Cary.
Dr. D. Chester Brown.
Dr. E. B. Heckel.
Dr. Thomas S. Cullen.
Dr. Olin West.
Dr. William C. Woodward.
Dr. Angus McLean.
Dr. Holman Taylor.
Dr. Otho A. Fiedler.
Dr. F. S. Crockett.
Dr. H. H. Shoulders.
Dr. E. A. Meyerding.
Dr. C. B. Wright.

At this conference the duties of the Medical Advisory Council were explained by Dr. Barker as simply advisory, not on policies but on individual problems which came up for solution. The Council has no initiative, no power, and no spontaneous action is taken, except in answer to definite requests for advice regarding specific problems. Dr. Barker stated that, so far as he knew, the Medical Council had never recommended the providing of beds in veterans' hospitals.

Dr. Dublin then explained that on request he had outlined a tentative plan along actuarial lines as to the number of beds necessary to carry out fully the provisions of the law if all the disabled veterans were to be taken care of. He stated that 129,000 beds would be necessary, but they never had recommended providing these beds and in fact their estimates were made for the purpose of showing how expensive the carrying out of this plan would be.

Dr. West spoke from the standpoint of the American Medical Association, urging the stopping of building of federal hospitals and the use of nonfederal hospitals of the country for the care of veterans. He felt that the government should take care of the veteran disabled because of service-connected injuries or illnesses, of nervous and mental and of tuberculous cases, and possibly of some other chronic cases. He also expressed the opinion that Mr. Cliff's idea of getting service in local institutions for emergency cases might be adopted, but he urged that the man whose disability has no service connection and who is able to take care of himself should do so and be made to do so and the government should not pauperize its citizens by giving to those who are able to provide for themselves.

The representatives of the American Legion expressed their opposition to the insurance plan of Dr. Shoulders. They stated that this plan had been fully presented and discussed by them and that rather than discuss concrete plans it would be better to try to arrive at some agreement on policies.

After discussions by Mr. Fesler, Dr. Goldwater, Mr. Cliff, Mr. Miller and Mr. Hayes, Dr. Cary suggested the formation of a smaller committee to formulate some policy that we could all agree on for future action and which would act as a liaison committee with the Veterans' Administration. This was agreed upon and the following committee was appointed:

Committee of the American Legion:
Mr. E. V. Cliff.
Mr. E. A. Hayes.
Dr. William M. Leffingwell (represented by Dr. Shapiro).
Capt. W. B. Miller.

Committee of the American Medical Association (appointed by the representatives of the Board of Trustees present):
Dr. E. H. Cary.
Dr. C. B. Wright.
Dr. William C. Woodward.
Dr. Holman Taylor.

Committee of the American Hospital Association:
Mr. Paul Fesler.
Dr. N. W. Faxon.
Dr. Hugh Scott.
Dr. F. A. Washburn.
Dr. N. R. Kneifl (Catholic Hospital Association).

The general meeting was then adjourned and the smaller committee went into session and elected Mr. Paul H. Fesler chairman. After a great deal of discussion, this committee reached a tentative agreement subject to endorsement by the various organizations.

This tentative agreement is the final result of the various meetings held. The principles laid down can be used as the foundation for future cooperation. While it does not represent the principles of the Shoulders resolution as to insurance, it does give an opportunity to work out constructive legislation. Many of the medical profession, who are not committee members, feel very much pleased with results so far and express the opinion that we have accomplished more in this short time than could have been expected. Dr. Shoulders is entitled to a great deal of credit for having brought his resolution before the House of Delegates. It offered a distinctly constructive proposal that has served to make possible conferences and discussions of a most helpful nature and has centered attention of all groups concerned on the undesirable features of the method now in use under government control.

We therefore wish you would give this tentative agreement which follows your careful consideration:

1. There are no available statistics on which a comparison could be made between the cost of care in federal and nonfederal hospitals, for the same class of cases. It was agreed that the chairman, Mr. Fesler, should obtain a study of treatment costs in federal and nonfederal hospitals, comparing the cost of care of like diseases.

2. At the request of the Legion a definition of an emergency was agreed on which was as follows: "An emergency case, in the opinion of this committee, is a case where there is need for medical or hospital service which cannot be furnished by veterans' hospitals promptly enough to prevent avoidable danger to the health and life of the patient or to prevent a lasting disabling condition." This is more of a legal than a medical definition—it covers a great deal.

3. It was recommended that the hospital program of the American Legion having to do with nervous and mental and tuberculous cases and service-connected cases be approved, including the extension of hospitals for the care of these cases where necessary, it being definitely understood, however, that the beds provided by the extension of hospitals for nervous and mental and tuberculous cases will not be used for the care of general medical and surgical non-service-connected cases. It was further agreed that there were non-service-connected general medical and surgical conditions of a chronic nature that the nonfederal hospital would not care to accept, and conversely there would be service-connected cases which might be more satisfactorily cared for in nonfederal hospitals.

4. On the motion of Dr. Cary, the chairman was authorized to appoint a committee to draw up an amendment to the existing law to permit veterans to be taken care of in home hospitals by their own doctors at government expense. On this committee are Dr. Woodward, Mr. Cliff and Dr. Faxon.

5. It was recommended that liaison committees be organized in every state, consisting of representatives of the State Hospital Association, the State Medical Association and the State Legion and the local regional representatives of the Veterans' Administration, looking toward better cooperation among these groups.

6. Mr. Hayes, representing the American Legion, urged the continued advice and cooperation of the members of the medical and hospital associations as the "best and most skilful care available was necessary in the treatment of disabled veterans."

The committee then adjourned, agreeing to meet at the call of the chairman. It was further agreed that a report should be made which could be sent to all the groups at the conference.

While in Washington, at the request of Representative McClintic, members of our committee presented arguments for the care of veterans with acute medical and surgical conditions in local hospitals by local physicians.

DISCUSSION

An attempt to evaluate the concrete results of our year's work is difficult. We believe, however, that we have accomplished something. The result of educational work of all kinds is often intangible but, if properly done, in the long run is often more fruitful than concrete results without a secure foundation. As this work has progressed throughout the country, numerous plans have been suggested. A number of Legion posts have adopted the Shoulders insurance plan, a number have adopted the emergency care plan, and various other plans have been suggested or adopted throughout the country. When one realizes that there are approximately 10,000 Legion posts, the impossibility of reaching a majority of them before the Legion convention in September with our machinery is quite apparent. Regardless of concrete plans, however, we have been able to bring to the attention of an interested, and the most influential, group in this country the benefits of individualistic practice and the danger of any type of federal or state medicine for the general medical and surgical care of the veterans and the general population, and particularly the danger to the veteran suffering from acute medical or surgical conditions. This also

holds true in the early diagnosis of cancer, tuberculosis, diabetes, nephritis and other diseases.

We believe that the work we have started should continue. On every side the medical profession is being confronted with health activities which, started with the highest motives in most instances, have through publicity and propaganda diverted the attention of the public from the practicing physician as the most essential factor in any public or private health program. The most essential factor in the proper care of the veteran is that he be taken care of by a doctor who is a well informed, interested practitioner of medicine in the local community, who is unfettered by official "red tape."

SUMMARY

First, our committee has established, through the Board of Trustees, a standing committee cooperating with the American Legion, the American Hospital Association and the Veterans' Administration to work out some change in policy in regard to the care of veterans.

Second, we have stimulated the medical legionnaires and the profession throughout the country to interest the local Legion posts in the dangers of federalized medicine from the standpoint of the veteran and the country.

Third, members of our committee have discussed veterans' legislation before the secretaries' conference and before the Annual Congress on Medical Education, Medical Licensure, and Hospitals.

Fourth, we have written and stimulated editorials and articles in the state medical journals on veterans' legislation. In this work Dr. Shoulders has been particularly active.

Fifth, every member of the committee has talked before groups of medical men and legionnaires, not only in their own but also in other states.

Sixth, by stimulating the establishment of a permanent committee in all states, representing the American Legion, American Hospital Association, Veterans' Administration and the American Medical Association, the machinery is gradually being built up for better mutual understanding and to prepare the way for any change in policy which may come in the future.

Committee on Legislative Activities	*Auxiliary Committee on Veterans' Legislation*
C. B. WRIGHT, Chairman.	H. H. SHOULDERS.
E. H. CARY.	ANGUS MCLEAN.
J. H. J. UPHAM.	F. S. CROCKETT.
THOMAS S. CULLEN.	E. A. MEYERDING.
D. CHESTER BROWN.	OTHO A. FIEDLER.
	HOLMAN TAYLOR.

II. HEARING ON RURAL INFANCY AND MATERNITY BILL

An additional matter of interest was the hearing on the Maternal and Infancy bill before the Committee on Commerce in the United States Senate on Feb. 4, 1932. Dr. Holman Taylor of Texas, Dr. H. M. Johnson (sent by the Minnesota State Medical Association), Dr. George W. Kosmak of New York, Dr. W. D. Chapman of Illinois, Dr. W. C. Woodward and Dr. C. B. Wright spoke against this bill.

We would urge the members of the House of Delegates to write to their senators for the report of the hearing on S. F. 572. Apparently there is a great need for information regarding this proposed legislation on the part of many members of our association, and we feel the members of the House of Delegates should be informed on this subject. There is a strong sentimental appeal in all legislation which purports to be for the benefit of mothers and children.

This bill differed from the old Sheppard-Towner bill in that it applied only to the rural population and to towns under 50,000. The reason for this limitation of course was not apparently well founded because statistical analyses, as brought out at the hearing, fairly uniformly showed that maternal and infancy death rates are less in rural than in urban districts.

It was also shown that as far as could be determined the operation of the Sheppard-Towner Act had no influence on maternity and infancy death rates.

This bill was referred out from the Committee on Commerce of the Senate with the rural aspects of the bill stricken out. There was also a minority report against this bill signed by Senators George H. Moses, Edwin S. Broussard, Hubert D. Stephens, Harry B. Hayes, Josiah W. Bailey, Marcus A. Coolidge and Hiram Bingham.

We would also recommend your reading, if you have not done so, Senator Bingham's careful analysis of how the money was actually spent which was appropriated under the Sheppard-Towner Act. We would also like to call attention to the careful analysis of the subject "Federal Subsidies for Rural Maternal and Infant Hygiene," by Dr. Woodward. This can be obtained from the office of the American Medical Association.

It might be worth while for the officers of the American Medical Association to arrange a conference between the Committee on Legislative Activities of the American Medical Association and representatives of the organization of state health officers to find out why the health officers so persistently lobby for federal instead of state control of health activities.

C. B. WRIGHT, Chairman.
E. H. CARY.
J. H. J. UPHAM.
THOMAS S. CULLEN.
D. CHESTER BROWN.
COMMITTEE ON LEGISLATIVE ACTIVITIES.

III. After careful consideration the committee agrees to the purpose and purport of the resolutions, introduced by Dr. Shoulders and referred to the Reference Committee on Legislation and Public Relations and then to the Committee on Legislative Activities and to its Auxiliary Committee on Veterans' Legislation, and recommends that the House of Delegates refer these resolutions back to the Committee on Legislative Activities without instructions.

C. B. WRIGHT, Chairman.
D. CHESTER BROWN.
E. H. CARY.
H. H. SHOULDERS.
E. A. MEYERDING.
F. S. CROCKETT.
HOLMAN TAYLOR.
THOMAS S. CULLEN.
WILLIAM C. WOODWARD, Ex Officio.

Dr. Wright moved that section I of the report dealing with veterans' legislation be adopted and that the committee be continued. The motion was seconded by Dr. B. F. Bailey, Nebraska, and carried, after discussion by Dr. Junius B. Harris, California.

It was moved by Dr. Wright that section II of the report, referring to the hearing on the rural infancy and maternity bill, be adopted. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and carried.

Dr. Wright moved that section III of the report, referring to the resolutions introduced by Dr. H. H. Shoulders, Tennessee, be adopted. The motion was seconded by Dr. H. H. Shoulders, Tennessee, and carried.

On motion, duly seconded and carried, the report was adopted as a whole.

Resolution on the Appointment of a Committee to Study Birth Control

Dr. J. D. Brook, Michigan, moved the adoption of resolutions providing for the appointment by the President of a suitable Committee on the Study of Birth Control.

The motion was seconded by Dr. Carl F. Moll, Michigan, and discussed by Dr. Charles E. Mongan, Massachusetts, and Dr. J. W. Van Derslice, Illinois.

REPORT OF REFERENCE COMMITTEE ON EXECUTIVE SESSION

Dr. Samuel P. Mengel, Pennsylvania, for the Reference Committee on Executive Session, presented the following report:

This is a controversial subject and the committee believes that it would not be advisable at this time to inject this subject before the profession. The committee therefore disapproves the adoption of the resolutions.

J. W. VAN DERSLICE, Chairman.
S. P. MENGEL.
ARTHUR W. BOOTH.
J. F. D. COOK.

Dr. J. W. Van Derslice, Illinois, moved, as a substitute for Dr. Brook's motion, that the recommendation of the Reference Committee on Executive Session be adopted. The motion was seconded by Dr. John F. Hagerty, New Jersey, and carried, after discussion by Dr. Holman Taylor, Texas.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. W. F. Braasch, Chairman, presented the report of the Reference Committee dealing with the Report of the Board of Trustees.

Dr. J. H. J. Upham, a Trustee, read a statement from the Board of Trustees in reply to questions raised in the report of the Reference Committee.

The subjects in the report of the Reference Committee were discussed by Dr. W. F. Braasch, Minnesota; Dr. Junius B. Harris, California; Dr. J. W. Van Derslice, Illinois; Dr. Olin West, Secretary; Dr. C. B. Wright, Minnesota; Dr. William Duffield, California; Dr. Wendell C. Phillips, a Past President; Dr. H. H. Shoulders, Tennessee; Dr. B. F. Bailey, Nebraska; Dr. Isaac A. Abt, Section on Pediatrics; Dr. Holman Taylor, Texas; Dr. G. Henry Mundt, Illinois; Dr. J. W. Burns, Texas; Dr. H. M. Johnson, Minnesota, and Dr. A. E. Bulson, Indiana.

On motions duly seconded and carried, the following report of the Reference Committee on Reports of Board of Trustees and Secretary was adopted section by section and as a whole:

Your committee notes with commendation the evidence of progress made during the past year as shown by the reports submitted to the Board of Trustees by the various bureaus and committees. Unless the members of the House of Delegates have taken the time to review carefully each item of the report, they cannot conceive of the volume and variety of progressive work carried on under their supervision. It is a great pity that such information cannot be disseminated among the entire membership of the Association. If it were possible, every Fellow would appreciate how much is being accomplished by his financial support, which amounts individually to so modest a sum. The action taken by the trustees in maintaining the present Fellowship dues receives our whole-hearted approval. This is no time to diminish the Association activities, which a reduction in income would necessitate. Rather than diminish our activities, we should increase them. The ever increasing problems confronting organized medicine as the result of the present social and economic upheaval demand vigorous consideration and early solution if possible, at our hands.

THE JOURNAL

Your committee sets its stamp of approval on its official publication; namely, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. We are glad to know that it is generally regarded as a recognized leader in its field by both medical and lay critics. THE JOURNAL offers every one of us the opportunity to keep in touch with the developments of modern medicine. Every member of the Association should regard it his duty to read its contents carefully. Your committee is glad to know of the continued support accorded the special journals published by the Association, which are maintaining the high standard set by the organization. The Association is to be complimented on the high character of its publication.

HYGEIA

Your committee desires to commend the continuous progress made by HYGEIA in the development of its circulation and the increased interest among physicians as well as the laity. The fact that, in spite of the present financial conditions, the management is able not alone to pay operating costs but to make a modest net income, merits hearty approval. We particularly approve of the improvements made by its editorial department, embracing the cover, the type, and the general make-up. We note with satisfaction the character of the articles and the adaptation of features employed with success by other magazines. HYGEIA is deserving of support by the medical profession. The least that could be done is to see that it is in every public library in the country.

QUARTERLY CUMULATIVE INDEX MEDICUS

Your committee notes with interest the fact that this is the first year that the Association has become solely responsible for the financial support of the QUARTERLY CUMULATIVE INDEX MEDICUS. Although it will be a source of additional expense, we believe that continuation of this important publication is essential to scientific medicine and, in assuming this responsibility, the Association is conveying a great benefaction to the future of scientific medicine.

LIBRARY

Your committee would especially recommend the continued development of the package library service, which has been increased during the year some 20 per cent. The importance of this work is difficult to appreciate in that it makes available a wide range of material ordinarily unobtainable in outlying districts. This, together with the correspondence regarding medical references, is a most important service of the Association.

COUNCIL ON PHARMACY AND CHEMISTRY

We note that the work of the Council on Pharmacy and Chemistry has been going on apace. No activity sponsored by the Association has done more to raise the standard of medicine than the extraordinary work carried on by the Council and its subsidiary, the Chemical Laboratory. It has been a most important factor in establishing the high standard of therapy set by our association. We would especially commend THE JOURNAL for its action in giving full publicity to the investigations of the Council. The Council has done distinct service through its publication of New and Nonofficial Remedies, the annual printing of the Council Reports, of special reports, of Useful Drugs and the Handbook for Interns, all of which are of the greatest practical importance to the profession. We would also commend the study recently carried on by the Council in the field of intravenous therapy. The wiles of advertisers have led some of the profession to believe that intravenous therapy offers special merits over other forms of medication. The Council deserves great credit for demonstrating that many of these claims were inspired by commercialism, and that intravenous therapy is indicated only in special conditions. The Council has shown quite conclusively that, for routine medication, the oral or rectal route is safer and to be preferred.

The importance of the Committee on Foods, which has recently been given an independent status, is becoming quite evident. While it may be too early to pass judgment as to the final value of its work, nevertheless it would seem that what it has already accomplished is of a distinctly constructive nature. If it can influence and correct any untruthful statements made in the advertising of foods, it will be of great value to the public. If it can be of help in giving the profession a better idea of the value of certain nutritional products, it will also be worth while.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION

The important work done by the Bureau of Health and Public Instruction merits commendation. Efforts to stimulate the interest of the laity in medical problems should be furthered in every legitimate way. The influence of the radio seems to be increasing apace. We who are forced to listen to the so-called health messages given out by charlatan advertisers naturally resent their blatant audacity. We urge the continuance of the efforts that have been made to stop this obnoxious publicity.

Your committee commends the efforts made to stimulate interest in periodic health examinations. In this connection it should be emphasized that the examination given must be thorough and include all the modern clinical methods. Without complete physical and laboratory data, periodic health examinations will fail of future approval.

We commend the close cooperation established with lay organizations, such as the Parents and Teachers Congress. Every effort should be made to have the medical profession take the lead in all matters pertaining to health.

BUREAU OF LEGAL MEDICINE AND LEGISLATION

The work of the Bureau of Legal Medicine and Legislation has been of value to the medical profession in keeping the Association and its members informed in regard to the ever increasing legislative problems, both state and national, which affect the practice of medicine. The staff of this bureau has

been of great aid in the past year in giving freely of legal advice and in helping to solve the various legislative problems that have arisen.

INCOME AND EXPENDITURE

Although many rightful demands are undoubtedly made on the Board of Trustees for increased funds by the various bureaus and committees, nevertheless your committee believes that some of the activities which the Association is now carrying on are inadequately financed. We refer particularly to the work carried on by the Committee on Legislation and by the Bureau of Medical Economics.

BUREAU OF MEDICAL ECONOMICS

The significance of the work carried on by the Bureau of Medical Economics in its bearing on the future of organized medicine cannot be overestimated. Taking advantage of its accumulating data, and guided by the experience of the medical profession in other countries, the solution of economic problems in the future should be made more easy. The need of such a movement has long been widely recognized and sporadic attempts to cope with the various problems have been made by individual state societies during the past decade. It may be remembered that the demand for the institution of this all important bureau was made in the House of Delegates last year by the delegates from California and passed with much enthusiasm. The pity is that such a movement was not started years ago, so that the data which might have been accumulated could now be available when sorely needed. Now that the machinery has been tardily erected for this all important work, it would seem that everything possible should be done to quicken its aims. Its director undoubtedly deserves credit for what he has already accomplished and for the wide scope outlined for the future activities of his department. It appears to your committee, however, that the need for immediate results in obtaining all possible data, the desirability of making them available to every state association, and the furtherance of their adoption, is imperative.

While the wide range of topics for investigation noted in his report is to be commended, it is evident that if all the subjects were properly investigated, years of work with the present personnel would be necessary in order to arrive at any conclusions. In the solution of the many problems involved, not alone is it essential to have an accumulation of facts bearing on the problems, but principles for their solution must be recommended. The question might well be raised whether it would not be advisable to single out a few of the most urgent problems and pursue them to an immediate constructive conclusion. The difficulties of solving the problems peculiar to various districts of the country again call our attention to the desirability of regional supervision.

In reviewing the financial budget of the Board of Trustees, we note that the sum made available for carrying on the operations of this bureau was inadequate. Your committee recommends that this amount should be greatly increased and that the scope and the personnel of this department be augmented.

HOUSE OF DELEGATES

Your committee desires to call attention to the fact that resolutions and instructions adopted by the House of Delegates are occasionally overlooked by the Board of Trustees or other officers of the Association and fail to receive any executive action. Doubtless, in some cases, logic and common sense would explain such action. To be specific, we refer to a recommendation made by the President of the Association and adopted last year by the Reference Committee on Reports of Officers and approved by the House of Delegates, which endorsed the arrangement of scientific meetings in various sections of the country by association officers. A word of explanation in regard to its disposition might have been included in the report of the Trustees to the House of Delegates.

In conclusion your committee would raise the question whether the members of the House of Delegates representing the membership of our Association are given sufficient opportunity to discharge their duties as such representatives and to take part in the activities of the Association. It is open to question whether they can become familiar with its policies in the short annual sessions now held. In raising the question, we do not reflect on the ability and judgment of the Board of Trustees and the officers who direct the affairs of the Association. It is possible, however, that a more permanent influence and contact with the activities by members of the House of Delegates might be of mutual benefit. This could be attained either by meeting several days prior to the week of the annual session, or by semiannual meetings of the House of Delegates instead of annual as at present. We realize that this subject has been brought up before and has met with adverse action. It is only after discussion with a number of the delegates that the desirability of further cooperation on the part of the House of Delegates is brought up for further consideration.

Your committee presents these suggestions for your consideration. It is recommended that the Delegates record their desires definitely for further guidance.

On request, the Secretary explained the methods used in trying to build up Fellowship.

NEW BUSINESS

Resolution on Increase of Burden of Taxation on Medical Profession

Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, presented the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The relief of economic chaos is dependent on the restoration of confidence and stability of thought among the American people in the place of hysteria, confusion and indecision;

WHEREAS, The Congress of the United States has in contemplation a return to the income tax in effect during the World War;

WHEREAS, The burden of earned income tax falls heavily as class legislation on the physician and surgeon who works day and night for the small fees he may be able to collect; be it

Resolved, That Congress be immediately advised of the injustice, inequality and the burden of this taxation on the medical profession in this time of depression and that they be requested to ponder, stop, look and listen to our appeal against injustice to the medical profession of America.

Resolution on Assistance to Small Hospitals in Raising Their Standards

Dr. R. W. Fouts, Nebraska, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, At the annual meeting of the American Medical Association held in Detroit in June, 1930, a resolution was unanimously passed directing the Council on Medical Education and Hospitals of the American Medical Association to begin a program of standardizing the small hospitals of the country; and

WHEREAS, No classification of the small hospitals has been established, and many of these small institutions would gladly welcome a survey and constructive advice relative to improving their service and adding to their efficiency; and

WHEREAS, The majority of the 6,612 hospitals now on the official register of the American Medical Association are small hospitals which should have created for their benefit certain definite standards which they desire to meet; and

WHEREAS, It is the belief of many hospital authorities that the American Medical Association, composed of practitioners of medicine and surgery in all specialties, is the one organization best able to give them constructive information relative to improving hospital service; therefore be it

Resolved, That this House of Delegates urge the Council on Medical Education and Hospitals to give all possible assistance to the small hospitals so that their standards may be raised and their efficiency accordingly improved.

Memorandum Concerning Reduction in Number of Officers in the United States Army

Dr. Holman Taylor, Texas, presented the following statement, which was referred to the Reference Committee on Legislation and Public Relations:

For many years, from time to time, since the World War, there has been discussion in Congress looking to a reduction in the number of officers in the army. Whenever this has come up, even in the time of President Coolidge, it was thoroughly understood that the Medical Department of the Army was already underofficered to meet the present peace time needs of the army adequately, particularly so with respect to the officers of the Medical Corps and the Dental Corps. So it was a complete surprise when on last Friday (May 5) the Committee on Appropriations of the House recommended to Con-

gress the passage of the proposed army appropriation bill for 1933, to see that a cut or reduction of 2,000 officers from the army was recommended, and that it would affect the Medical Department. It was always understood that any cut would not be made applicable to the Medical Department, known as the "non-promotion list," but it would come from the "promotion list," or line of the army, which in time of peace can best stand a reduction in the number of officers, if any is to be made.

It is now known that a study of that bill by the general staff indicates that the heaviest reduction of all will fall on the Medical Department. In other words, the Medical Department will stand to lose 323 officers, of which number 260 will be from the Medical Corps alone. A greater percentage loss than any other branch or service. The Medical Department has had a hard time for many years to keep up with the many demands made on it with its present strength. A further reduction at this time will literally ruin the Medical Department. It will be forced to withdraw from practically all the activities now carried on under War Department policies which are considered essential and will render the Medical Department unable to continue to operate efficiently many of its station hospitals and otherwise care for the different military posts. This will cause suffering, inefficiency and a lowering of morale. The situation is a most serious one, in which the American Medical Association is naturally interested, both from the standpoint of interest in their brothers in the Medical Corps of the Army and as patriotic citizens who naturally do not desire to see the welfare of the enlisted men of the army adversely affected. They will suffer because of lack of proper medical attention if this reduction takes place.

A statement of such interest on the part of the President of the American Medical Association, or other proper official, addressed to those in authority in Washington, would be most timely, and probably produce prompt results.

RECOMMENDATIONS

1. Send a telegram to the President in substance as follows:

"Recent newspaper articles indicate that there will be a cut of 2,000 officers from the army. Although the Medical Department is well known to be underofficered at the present time, it is understood that this reduction in officers will seriously affect the Medical Department; in fact, the largest cut will fall on that department. The American Medical Association is deeply concerned that such action is even contemplated and earnestly hopes that no action will be taken that will so reduce the personnel of the Medical Department of the Army that its efficiency may thereby be impaired.

2. Similar telegrams to be sent to the speaker of the House of Representatives and to the Secretary of War.

Request for Discussion of Restriction of Prescriptions of Medicinal Alcohol

Dr. J. W. Van Derslice, Chairman of the Reference Committee on Executive Session, presented the following message, which the Reference Committee had not received through the usual channels, and with which it felt it had nothing whatever to do:

A member of the New York delegation requests that the Committee on Executive Session provide, in their order of business, time for the general discussion of the present status of legislation in regard to restriction of prescriptions of medicinal alcohol.

The Speaker referred this to the committee composed of the Chairman of the Board of Trustees, the Secretary of the Association and the Speaker of the House, which was appointed by the House to arrange a program of subjects for consideration at the executive session.

Report of Board of Trustees

Dr. J. H. J. Upham, a Trustee, presented the following report: The Board reports that it endorses the resolutions introduced by Dr. Southgate Leigh, Virginia, relative to the need for closer cooperation between the county and state associations and the American Medical Association.

Dr. F. S. Crockett, Indiana, moved that the report be adopted. The motion was seconded by Dr. Arthur J. Bedell, New York, and carried.

Request for Publicity by Reference Committees Concerning Hearings on Matters Referred to Them

Dr. D. E. Sullivan, New Hampshire, presented the following request, which was referred to the Reference Committee on Rules and Order of Business:

Whenever a resolution or motion is referred to a Reference Committee it shall be the duty of the chairman of such committee to give it publicity in the DAILY BULLETIN and by such other means as may be convenient, stating the subject-matter and the time and place at which a hearing will be given.

Report of Committee on Medicinal Alcohol

Dr. William H. Mayer, Chairman, presented the following statement:

A request was made that this committee report to the House of Delegates the present status of the legislation which has been the subject of so much controversial discussion before this group for some years. The committee felt some years ago that it was best that this subject be discussed in executive session because of the tenderness of the situation.

When the Lambert-Yellowley suit was before the Supreme Court, the House of Delegates felt that, in the event that section 7 of the Volstead Act were declared unconstitutional, the prescription of alcohol should have some adequate regulation. A committee consisting of Dr. Southgate Leigh, Dr. Paul White, Dr. Tom B. Throckmorton and myself was created to draft such regulations in the event of the success of this suit. The committee had referred to it from time to time certain other resolutions, one of which was that certain bills should be prepared against the continuance of the irrelation of the United States government limiting the practice of medicine and the principle involved in section 7 of the Volstead Act.

This committee was also required to draft, and make a part of this bill, certain reasonable regulations. We studied the proposition. We understood the practical side of it; we appealed to the various governmental officers for their suggestions, and we felt that our time would be wasted were we to present any such legislation under the conditions which then existed.

We appeared before the Wickersham Committee, feeling that this subject was germane. Dr. Woodward and myself represented the American Medical Association, and I think that I may say with pardonable pride that, of all the recommendations of the Wickersham Commission, one unanimous report was in complete support of the principle outlined by our association.

These bills were eventually drafted after the Wickersham Commission recommended that the irrelation contained in the limitation from nine to ten days be removed from the Volstead Act. These bills were prepared and introduced at the present session of Congress. There were similar bills in the House, one presented by Senator Copeland of New York and the second by Representative James Beck of Pennsylvania. Hearings were held on these bills. Dr. Woodward appeared before the House hearings, at which time Colonel Woodcock and Commissioner Doran felt that we had placed in those bills no statement concerning the amount which might be prescribed at any one time. You can readily see our difficulty. Were we to have made this amount a large quantity of alcohol, our recommendation would have been the subject of considerable criticism; secondly, had we put a small quantity in, say four ounces of prescription, immediately we would have been accused of trying to increase the service charge to our patients by repeated subscriptions. Being between Scylla and Charybdis, we simply stated that we felt that that should be subject to adequate regulation. Commissioner Doran and Colonel Woodcock asked that the bill be so amended that it would contain definite legal restrictions to the point that it would place in the hands of the Secretary of the Treasury and the Attorney-General, now jointly controlling the medicinal alcohol situation, the power to put down those regulations governing the prescription of whisky.

Now, gentlemen, I want to say that I don't know what the medical association would do without Dr. Woodward at Washington. His contacts and his associations, the high plane on

which you are represented, is something that you could not buy elsewhere. His commissionership of health in the District of Columbia for over twenty years has given him an entrée and a standing there which makes him respected by all people, and you gentlemen derive reflected credit from his career. So our motives were always understood in these things; but we have first fought for a principle, that principle which reserves the right to you to prescribe in the legitimate practice of medicine anything that God has created or may create, for the benefit of your patient. Aside from that I think that we have also represented your point of view in that we have insisted that regulatory measures should always be in force so that the intent and purpose of the laws of these United States might be safeguarded.

We have no other statement to make concerning this. I don't care whether they put all the whisky six miles under the ocean so far as I am concerned, but I do say if this principle were extended it might be just as easy for Congress to say that you must consult with a recognized chiropractor before you do an appendectomy.

I have made some thirty-six trips to Washington, back and forth, during the last six years. I may say that the representatives of the departments of the government are most cordial gentlemen. Our bills at the present time have been postponed in one committee, mainly because one of our state association groups did not play ball. They simply went to one legislator and he had letters from the doctors that this was not necessary, so why bother with it, and for that reason his adverse vote resulted in the postponement of this thing at least temporarily. It may not be carried out this session, but the favorable report of the committee I think will eventually be gotten and that this thing will eventually become a law.

Until the Wickersham Commission made its report, the President had really no obligation not to veto this bill. At the present time I think he has. You know he is on record as saying that modification means nullification, so therefore if he sticks to that principle he must veto this legislation if it is passed by both Houses of Congress.

What I would like to have from you gentlemen is your expression of confidence in your Board of Trustees and its committee appointed for this purpose. Six years of work in this has been a distinct pleasure. Gentlemen, that is the situation. I hope you understand it and that this House will either express its confidence in its committee and the Board of Trustees in this matter, or see fit to advise us as to a course which will be acceptable to you.

Some organizations throughout the country have gone in the wrong direction and have taken unto themselves to dictate policies which have become confused with ours. In one particular case an estimable gentleman stepped into the committee and gave, I think, the most remarkable lecture on the medicinal values of beer that I have ever heard, so much so that I was convinced when he got through that I thought it was wonderful, and yet I recognized that the people there did not understand, that it was clouding the issue on a principle and helped to defeat our purposes at the time. For that reason I wish your committee might have your complete confidence in this matter so that we might go forward in the future.

Dr. Samuel J. Kopetzky, New York, moved that the report be adopted and that it is the sense of the House that it express its thanks, its appreciation, and its confidence in the committee which has just reported, the motion was seconded by Dr. Carl F. Moll, Michigan, and carried after discussion by Dr. Southgate Leigh, Virginia.

Time of Thursday Meeting

Dr. Arthur C. Morgan, Pennsylvania, moved that the Thursday afternoon meeting be called to order at 1 o'clock. The motion was seconded by Dr. Samuel J. Kopetzky, New York, and carried.

Dr. B. F. Bailey, Nebraska, moved that the House arise from executive session. The motion was seconded by Dr. Samuel J. Kopetzky, New York, and carried.

The House recessed at 5:10 p. m., to meet at 1 o'clock, Thursday afternoon, May 12.

Fourth Meeting—Thursday Afternoon, May 12

The House of Delegates was called to order at 1 p. m., by the Speaker, Dr. F. C. Warnshuis.

Report of Reference Committee on Credentials

Dr. J. D. Brook, Chairman, stated that Dr. L. C. Ingram, who had been vouched for by Dr. G. H. Edwards, president of the Florida Medical Association, and by the other delegate from Florida, Dr. Bundy Allen, but whose name did not appear on the Secretary's list of delegates, had made application to be seated in place of Dr. C. D. Christ. Dr. Brook moved that Dr. Ingram be seated. The motion was seconded by several delegates, and carried, and Dr. L. C. Ingram was seated.

Dr. Brook stated that a total of 157 delegates had filed proper credentials, and moved that the report of the Reference Committee be adopted. The motion was seconded by Dr. Charles J. Whalen, Illinois, and carried.

On motion of Dr. Mather Pfeiffenberger, Illinois, seconded by Dr. Arthur J. Bedell, New York, and carried, the House dispensed with the reading of the minutes.

Report of Reference Committee on Rules and Order of Business

Dr. R. W. Fouts, Nebraska, presented the following report:

The following resolution was introduced by Dr. D. E. Sullivan of New Hampshire:

Resolved, That whenever a resolution is referred to a reference committee it shall be the duty of the chairman of such committee to give publicity to the same in the DAILY BULLETIN and by such other means as may be convenient, stating the subject matter, the time and place at which a hearing will be given.

Your committee feels that it would be impractical to establish a hard and fast rule, such as implied in this resolution, but would suggest that any one interested in a resolution referred to a reference committee immediately communicate with the chairman of said committee as to the time and place of their meeting.

B. L. BRYANT, Chairman.
R. W. FOUTS, Secretary.

On motion of Dr. Fouts, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the report of the Reference Committee on Rules and Order of Business was adopted.

Report of Reference Committee on Legislation and Public Relations

Dr. Grant C. Madill, Chairman, presented the following report:

1. Your committee has considered the statement presented by Dr. Holman Taylor, objecting to the reduction of officers in the Medical and Dental Corps of the Army, and approves of the recommendations contained therein.

2. Your committee also approves of the resolutions introduced by Dr. Burt R. Shurly, relative to increasing the burden of taxation on the medical profession.

GRANT C. MADILL, Chairman.
J. F. HAGERTY.
SOUTHGATE LEIGH.
C. J. WHALEN.
A. A. ROSS.

It was moved by Dr. Madill that the first section of the report, protesting against the reduction of medical officers in the army, be adopted. The motion was seconded by Dr. Alexius McGlannan, Maryland, and carried.

Dr. Madill also moved that the second section of the report, dealing with the burden of taxation on the medical profession, be adopted. The motion was seconded by Dr. Samuel P. Mengel, Pennsylvania, and carried.

On motion of Dr. Madill, seconded by Dr. Alexius McGlannan, Maryland, and carried, the report of the Reference Committee on Legislation and Public Relations was adopted as a whole.

The House recessed for ten minutes.

Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. N. B. Van Etten, Chairman, read the following report:

Considering the request of the Secretary for a decision of the House of Delegates on the question of either amending the By-Laws or adding a standing rule, incorporating the sense of the resolution adopted at the Philadelphia session in 1931, which reads as follows:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that these provisions of the Constitution and By-Laws of the American Medical Association dealing with the credentials of constituent state associations shall be so construed by the Reference Committee on Credentials that when a constituent state association reports that one of its delegates and his respective alternate are both unable to attend a specified annual session of the American Medical Association in which one of them could have functioned as a delegate, under such conditions (provided the constituted body or council of such a constituent state association is authorized by its state constitution and by-laws to act for the state association and its house of delegates), when such authorized state body has duly elected others of its members to fill the vacancies caused by the absence of both a delegate and his respective alternate, such a duly elected substitute delegate, or his duly elected substitute alternate who presents proper credentials shall be eligible to regular membership in the House of Delegates of the American Medical Association for such a specified annual session.

Your Reference Committee on Amendments to Constitution and By-Laws believes that a standing rule may wisely be added to the section on rules for the guidance of the Committee on Credentials which shall be 5 and shall read as follows:

When a constituent state association reports that one of its elected delegates and his elected alternate are both unable to attend a specified annual session of the American Medical Association, the constituted authority of said constituent state association may fill the vacancies caused by the absence of both an elected delegate and his elected alternate, and such a substitute delegate or his substitute alternate who presents proper credentials signed by the president and secretary of said constituent state association shall be eligible to regular membership in the House of Delegates of the American Medical Association in such a specified session.

N. B. VAN ETTEN, Chairman.
WALTER F. DONALDSON.
JOHN H. O'SHEA.
H. M. JOHNSON.

It was moved by Dr. Van Etten, seconded by Dr. Frederic E. Sondern, New York, and carried after discussion by Dr. Holman Taylor, Texas, that the report be adopted.

Dr. Van Etten moved that the Standing Rules be amended by the addition of this rule as number 5 under the heading Rules for the Guidance of the Committee on Credentials. The motion was seconded by Dr. Grant C. Madill, New York, and carried.

Report of Reference Committee on Medical Education

Dr. Irvin Abell, Chairman, presented the following report:

Your Reference Committee has considered the resolution introduced by Dr. R. W. Fouts urging the Council on Medical Education and Hospitals to give all possible assistance to the small hospitals so that their standards may be raised and their efficiency be accordingly improved, and recommends its adoption.

IRVIN ABELL, Chairman.
WILLIAM ALLEN PUSEY.
J. F. BURNHAM.
SEALE HARRIS.
F. S. CROCKETT.

On motion of Dr. Abell, seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, the report of the Reference Committee on Medical Education was adopted.

Report of Judicial Council

Dr. George Edward Follansbee, Chairman, presented the following supplementary report of the Judicial Council, which was adopted on motion of Dr. Follansbee, seconded by Dr. G. Henry Mundt, Illinois, and carried:

The privilege of healing the sick as a profession is a right granted only to those properly qualified and licensed by the state. It is a privilege belonging only to the medical profession. It is a sacrifice of professional dignity that this exclusive right of medicine is so often sold for individual gain or its possessor deprived of it against his will. In increasing numbers, physicians are disposing of their professional attainments to lay organizations under terms which permit a direct profit from the fees or salaries paid for their services to accrue to the lay bodies employing them. Such a procedure is absolutely destructive of that personal responsibility and relationship which is essential to the best interests of the patient.

Outstanding examples of this type of unearned gain are not difficult to find. There are insurance companies administering workmen's compensation benefits wherein the salaries or fees paid to the physician by the insurance company are so much below the legal fees on which the premium paid by the industry is based as to furnish a large direct profit to the insurance company. As mentioned in a former report of the Council, certain hospitals are forbidding their staffs of physicians to charge fees for their professional services to "house cases" but are themselves collecting such fees and absorbing them in the hospital income. Some universities, by employing full time hospital staffs and opening their doors to the general public, charging such fees for the professional care of the patients as to net the university no small profit, are in direct and unethical competition with the profession at large and their own graduates. They are making a direct profit by a practice of questionable legality, from the professional care. There are other examples which could be cited but those mentioned suffice.

The increasing number of such instances indicates either a thoughtlessness or a selfishness on the part of the participants that is disturbing to the Judicial Council and in its opinion warrants the Council in bringing the practice, with the disapproval, again to the attention of the House of Delegates and through it to the profession at large.

NEW BUSINESS

Proposed Amendment to Constitution

Dr. Southgate Leigh, Virginia, requested that section 2, article 5, of the Constitution be amended so that the presidents of the state societies shall be ex officio members of the House of Delegates.

The Speaker announced that this proposed amendment would lie over until the next annual session.

Resolutions of Appreciation to Dr. Edward B. Heckel

Dr. C. W. Roberts, Georgia, presented the following resolutions, which were adopted on motion of Dr. Roberts, seconded by Dr. Frederic E. Sondern, New York, and carried unanimously by a rising vote:

WHEREAS, Dr. Edward B. Heckel has served this House of Delegates for a quarter of a century; and

WHEREAS, He has served continuously as a member of the Board of Trustees for eight years, during seven of which he has been unanimously chosen by the Board as its Chairman, in recognition of the faithfulness, self-sacrifice and efficiency that he has displayed; be it

Resolved, That the House of Delegates extend to Dr. Heckel a rising vote of thanks; and be it further

Resolved, That this resolution be spread on the minutes of the House of Delegates and that a copy of it be suitably engraved and presented to Dr. Heckel.

Report of Reference Committee on Credentials

Dr. J. D. Brook, Chairman, stated that Dr. G. F. Zinninger, Ohio, who presented no credentials but whose name appeared on the Secretary's list and who was vouched for by other delegates from Ohio, desired to be seated as alternate delegate for Dr. C. W. Waggoner, Ohio.

Dr. J. Newton Hunsberger, Pennsylvania, moved that Dr. Zinninger be seated. The motion was seconded by Dr. John P. De Witt, Ohio, and carried.

It was announced that there were now 158 delegates who had filed proper credentials. The Secretary called the roll and stated that more than a quorum was in attendance.

Report of Reference Committee on Hygiene and Public Health

Dr. Junius B. Harris, Chairman, stated that the Reference Committee had considered "A Standard Classified Nomenclature of Disease" as submitted by the National Conference on Nomen-

clature of Disease in a temporary draft, and recommended that, until the conference had completed its report, the Reference Committee would have no report to make except that, on completion of the draft by the conference, the matter in toto should be submitted to the International Bureau of Vital Statistics and then to the American Medical Association. Dr. Harris moved that the report be adopted.

Dr. Frederic E. Sondern, New York, moved as a substitute for Dr. Harris's motion that the House favor the endorsement of the preliminary draft of "A Standard Classified Nomenclature of Disease." This motion was seconded by Dr. Arthur J. Bedell, New York, and carried, after discussion by Dr. Junius B. Harris, California, and Holman Taylor, Texas.

ELECTION OF OFFICERS

Election of President-Elect

The Speaker called for nominations for the office of President-Elect of the American Medical Association.

Dr. Randolph Winslow, Maryland, nominated Dr. Dean Lewis, Baltimore. The nomination was seconded by Dr. Irvin Abell, Kentucky; Dr. Mather Pfeiffenberger and Dr. G. Henry Mundt, Illinois; Dr. E. G. Wood, Tennessee; Dr. Walter Ralph Steiner, Connecticut; Dr. J. F. Hassig, Kansas; Dr. Walter F. Donaldson, Pennsylvania; Dr. John H. O'Shea, Washington; Dr. A. W. Skelsey, North Dakota, and Dr. Alexius McGlannan, Maryland.

Dr. Southgate Leigh, Virginia, nominated Dr. Hugh S. Cumming, Washington, D. C. The nomination was seconded by Dr. Edmond F. Cody, Massachusetts; Dr. Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health; Dr. Bertram L. Bryant, Maine; Dr. Carl F. Moll, Michigan; Dr. J. N. Baker, Alabama, and Dr. H. W. Wade, Philippine Islands.

Dr. Fred Moore, Iowa, nominated Dr. Walter L. Bierring, Des Moines, Iowa. The nomination was seconded by Dr. William Duffield in behalf of the full California delegation.

The Speaker declared the nominations closed, and appointed as tellers Dr. Samuel J. Kopetzky, New York; Dr. William R. Molony, California; Dr. T. O. Freeman, Illinois; Dr. S. L. Baysinger, Missouri, and Dr. E. G. Wood, Tennessee.

The Secretary announced that 152 members of the House had recorded themselves as present, and that 151 votes had been cast, of which Dr. Dean Lewis, Baltimore received 73; Dr. Hugh Cumming, Washington, D. C., 47, and Dr. Walter L. Bierring, Des Moines, Iowa, 31. The Speaker declared that none of the candidates had received a majority vote of the House.

The Secretary announced as the result of the second ballot that there were 153 members of the House who had recorded themselves as present and that 152 votes had been cast, of which Dr. Dean Lewis, Baltimore, received 98 and Dr. Hugh Cumming, Washington, D. C., 54.

The Speaker declared Dr. Dean Lewis, having received the majority of the votes cast, elected President-Elect of the American Medical Association.

On motion of Dr. Southgate Leigh, Virginia, duly seconded and carried, the election of Dr. Dean Lewis was made unanimous.

Election of Vice President

Dr. H. A. Miller, New Mexico, nominated Dr. W. H. Seemann, New Orleans. Dr. John H. O'Shea, Washington, seconded the nomination and moved that the nominations be closed and the Secretary cast the unanimous ballot of the House for Dr. Seemann.

The Speaker declared that as Dr. Seemann was a member of the House of Delegates, he was not eligible to election as Vice President.

Dr. Louis J. Hirschman, Michigan, nominated Dr. Rudolph Matas, New Orleans, as Vice President. The nomination was seconded by Dr. Seale Harris, Alabama, who moved that the nominations be closed and the Secretary be instructed to cast the unanimous ballot of the House for Dr. Matas as Vice President. The motion was regularly seconded and carried, and the Secretary cast the unanimous vote of the House of Delegates for Dr. Rudolph Matas. The Speaker declared Dr. Matas elected as Vice President of the American Medical Association for the ensuing year.

Election of Secretary

Dr. A. E. Bulson, Indiana, nominated Dr. Olin West, Chicago, as Secretary, and the nomination was seconded by Dr. H. H. Shoulders, Tennessee.

Dr. Samuel P. Mengel, Pennsylvania, moved that the nominations be closed and the unanimous ballot of the House be cast for Dr. Olin West as Secretary. The motion was seconded by Dr. H. B. Everett, Tennessee, and carried unanimously.

The Vice Speaker cast the ballot of the House for Dr. Olin West, Chicago, as Secretary, and the Speaker declared Dr. West elected unanimously for the ensuing year.

Election of Treasurer

Dr. Edward B. Heckel, Chairman, Board of Trustees, nominated Dr. Austin A. Hayden, Chicago, to succeed himself as Treasurer.

Dr. Arthur J. Bedell, New York, moved that the nomination be confirmed. The motion was seconded by several delegates, and carried, and the Speaker declared the nomination confirmed and Dr. Austin A. Hayden, Chicago, elected to the office of Treasurer.

Election of Speaker of the House of Delegates

The Vice Speaker, Dr. A. E. Bulson, took the chair and announced that nominations were in order for Speaker of the House of Delegates.

Dr. Louis J. Hirschman, Michigan, nominated Dr. F. C. Warnshuis, Grand Rapids, Mich., as Speaker of the House of Delegates. Dr. T. O. Freeman, Illinois, seconded the nomination and moved that nominations be closed and the Secretary cast the unanimous ballot of this House for Dr. Warnshuis as Speaker. The motion was seconded by several delegates, and carried unanimously.

The Secretary cast the vote of the House and Dr. F. C. Warnshuis, Grand Rapids, Mich., was declared Speaker of the House of Delegates for the ensuing year.

Election of Vice Speaker of the House of Delegates

The Speaker resumed the chair and called for nominations for Vice Speaker of the House of Delegates.

Dr. R. L. Sensenich, Indiana, nominated Dr. Albert E. Bulson, Fort Wayne, Ind. The nomination was seconded by Dr. John A. Card, New York; Dr. William G. Ricker, Vermont; Dr. Walter F. Donaldson, Pennsylvania; Dr. R. W. Fouts, Nebraska, and Dr. W. Albert Cook, Oklahoma, who moved that the nominations be closed and the Secretary cast the ballot for Dr. Bulson as Vice Speaker. The motion was seconded by Dr. Samuel J. Kopetzky, New York, and carried.

The Secretary cast the unanimous ballot of the House of Delegates for Dr. A. E. Bulson, Fort Wayne, Ind., for Vice Speaker of the House of Delegates and the Speaker declared Dr. Bulson elected as Vice Speaker of the House for the ensuing year.

Election of Trustees

The Speaker announced that the next order of business was the election of a Trustee for a term of five years to succeed Dr. Edward B. Heckel, whose term of office had expired and who because of constitutional provisions was not eligible for reelection.

Dr. N. B. Van Etten, New York, nominated Dr. Arthur W. Booth, Elmira, N. Y. The nomination was seconded by Dr. Daniel S. Dougherty, New York; Dr. Samuel P. Mengel, Pennsylvania; Dr. R. H. Walker, West Virginia; Dr. R. L. Sensenich, Indiana; Dr. H. G. Stetson, Massachusetts; Dr. B. S. Pollak, New Jersey, and Dr. H. B. Everett, Tennessee, who moved that the nominations be closed and the Secretary cast the unanimous ballot of the House for Dr. Booth as Trustee of the Association. The motion was seconded by several members, and unanimously carried.

The secretary cast the unanimous vote of the House of Delegates for Dr. Arthur W. Booth, Elmira, N. Y., to succeed Dr. E. B. Heckel as a member of the Board of Trustees and the Speaker declared Dr. Booth elected as a Trustee of the Association for a term of five years.

The Speaker called for nominations for the office of Trustee to succeed Dr. Rock Sleyster, Wauwatosa, Wis., whose term of office had expired.

Dr. Joseph F. Smith, Wisconsin, placed in nomination Dr. Rock Sleyster, Wauwatosa, Wis., to succeed himself as Trustee of the American Medical Association, for a term of five years. The nomination was seconded by Dr. C. B. Wright, Minnesota; Dr. Walter F. Donaldson, Pennsylvania; Dr. J. W. Van Derslice, Illinois; Dr. William R. Molony, California; Dr. H. M. Johnson, Minnesota; Dr. D. E. Sullivan, New Hampshire; Dr. Seale Harris, Alabama; Dr. E. A. Hines, South Carolina, and Dr. E. P. Sloan, Illinois, who moved that the nominations be closed and the Secretary be instructed to cast the ballot of the House for Dr. Sleyster. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and carried unanimously.

The Secretary cast the unanimous ballot of the House for Dr. Rock Sleyster, to succeed himself as a member of the Board of Trustees, and the Speaker declared Dr. Sleyster elected as a member of the Board for a term of five years.

Nominations for Standing Committees

Dr. E. H. Cary, President, presented the following nominations:

Dr. E. P. Sloan, Bloomington, Ill., to succeed Dr. Donald Macrae, Jr. (deceased), on the Judicial Council for a term of five years.

Dr. Ray Lyman Wilbur, Washington, D. C., to succeed himself as a member of the Council on Medical Education and Hospitals for a term of seven years, and Dr. F. A. Washburn, Boston, for a term of six years to succeed on that Council Dr. Dean Lewis, Baltimore, who had just been elected President-Elect.

Dr. Frank H. Lahey, Boston, to succeed himself as a member of the Council on Scientific Assembly, for a term of five years, and Dr. Irvin Abell, Louisville, Ky., to succeed himself on the Council on Scientific Assembly to fill out the term of Dr. Lewis H. McKinnie (deceased), ending in 1934.

Dr. C. E. Humiston, Illinois, moved that these nominations be confirmed by the House. The motion was seconded by Dr. G. Henry Mundt, Illinois, and carried.

Address of President-Elect Dean Lewis

The Speaker introduced President-Elect Dean Lewis, who addressed the House as follows:

Mr. Speaker and Members of the House of Delegates:

It is needless for me to tell you how highly honored I am. You know every one has an ambition; it has always been my ambition to be President of the American Medical Association. The only sad thing about it is that it seems like the journey's end. I don't know how I can show my appreciation for the honor that you have conferred on me more than by filling to the best of my ability the duties of the office. I am greatly indebted to you.

Election of Affiliate and Associate Fellows

The Secretary read the following nominations for Affiliate and Associate Fellowship:

APPLICANTS FOR AFFILIATE FELLOWSHIP APPROVED BY COUNCIL ON SCIENTIFIC ASSEMBLY

Craig, John W., Lohrville, Iowa.
Finch, H. C., Pulaski, Iowa.
Hofstetter, George, Clinton, Iowa.
Smith, Ferdinand J., Milford, Iowa.
Smith, Frank S., Nevada, Iowa.
Bennet, Eben H., Lubec, Maine.
Cobb, Oliver, W., Easthampton, Mass.
Twombley, Edward L., Boston, Mass.
Moorhead, Martha B., Minneapolis.
Rishmiller, J. H., Minneapolis.
Warham, Thomas T., Minneapolis.
Wright, C. D'A., Minneapolis.
Sweetman, R. H., Sauk Center, Minn.
Delavan, D. Bryson, New York.
Fox, George Henry, New York.
McEncroe, John F., Schenectady, N. Y.
Hawkins, John A., Solebury, Pa.
Mahon, John B., Pittston, Pa.
Stevens, J. V., Janesville, Wis.

APPLICANTS FOR ASSOCIATE FELLOWSHIP FROM AMERICAN MEDICAL MISSIONARIES APPROVED BY JUDICIAL COUNCIL

Baker, Donald H., Mondome, Belgian Congo.
Baugh, Harold T., Andong, Chosen.
Brinkman, Harry, Resht, Persia.
Calvert, R. N., Shanghai, China.
Carman, John S., Hanumakonda, India.
Dorman, Henry G., Beirut, Syria.
Gibbons, Howard C., Burma, India.
Harley, George W., Monrovia, Liberia, West Africa.
Harris, Edwin A., Sake, Belgian Congo.
King, Judson C., Belgian Congo.
Manley, Charles R., South India.
Rue, George Henry, Seoul, Chosen.
Stannard, Raymond E., Ningpo, China.
Tuttle, Glen Willis, Belgian Congo.
Werelius, Walter R., Manipur, Assam, India.
Westcott, George W., Belgian Congo.

APPLICANTS FOR ASSOCIATE FELLOWSHIP NOMINATED BY THE SECTIONS INDICATED

LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Boyko, G. Victor, Paterson, N. J.
Gilden, Charles T., Jr., Philadelphia.
Lieban, E. Alan, New York.

PATHOLOGY AND PHYSIOLOGY

Cunningham, Robert S., Nashville, Tenn.
Fulton, John F., New Haven, Conn.
Langston, W. C., Little Rock, Ark.
LeCount, E. R., Chicago.
Looney, J. M., Philadelphia.
Taylor, Walter F., Dallas, Texas.

NERVOUS AND MENTAL DISEASES

Jungeblut, Claus W., New York.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Brokaw, Raymond V., New York.
Exner, Max Joseph, New York.
Luckett, George S., Stanford University, Calif.
Norton, John F., Detroit.

On motion of Dr. Arthur C. Morgan, Pennsylvania, seconded by Dr. Daniel S. Dougherty, New York, and carried, the applicants listed were elected to Affiliate or Associate Fellowship in the American Medical Association, as indicated.

Place of the 1933 Annual Session

The Speaker announced that the next order of business was the selection of the place of the 1933 annual session and requested that the Board of Trustees present nominations:

Dr. Edward B. Heckel, Chairman, Board of Trustees, stated that the officers of the Association had investigated the facilities of the cities from which invitations for the 1933 annual session of the Association had been received and reported that the following cities, mentioned in alphabetical order, had adequate facilities to accommodate a successful meeting of the Association: Atlantic City, Cleveland and Milwaukee.

Dr. F. Gregory Connell, Wisconsin, extended an invitation from Milwaukee; Dr. Walt P. Conaway, New Jersey, an invitation from Atlantic City, and Dr. C. W. Stone, Ohio, an invitation from Cleveland.

The Secretary announced that 153 delegates were registered and that of 128 votes cast, 73 were for Milwaukee, 44 for Cleveland, and 11 for Atlantic City.

The Speaker declared Milwaukee the place for the next annual session of the American Medical Association, as it had received a majority of the votes cast.

Unfinished Business

Dr. N. B. Van Etten, New York, moved that the House of Delegates unanimously express its appreciation by a hearty vote of thanks to the Louisiana State Medical Society, to the local medical societies, to the Woman's Auxiliary, to the city of New Orleans and to the press, for their delightful hospitality. The motion was seconded by Dr. Irvin Abell, Kentucky, and carried unanimously. The Secretary was requested to tender the appreciation of the House.

The House of Delegates adjourned sine die at 3 o'clock.

MINUTES OF THE SECTIONS

SECTION ON PRACTICE OF MEDICINE

WEDNESDAY, MAY 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. G. Gill Richards, Salt Lake City.

Dr. Adolph S. Rumreich, Washington, D. C., read a paper on "The Typhus-Rocky Mountain Spotted Fever Group: Developments in Epidemiology and Clinical Considerations." Discussed by Drs. Victor H. Bassett, Savanah, Ga.; G. Gill Richards, Salt Lake City, and Adolph S. Rumreich, Washington, D. C.

Drs. John W. Towey, Powers, Mich., Henry C. Sweany, Chicago, and Willis H. Huron, Iron Mountain, Mich., presented a paper on "A Severe Bronchial Asthma Apparently Due to Fungus Spores Found in Maple Bark." Discussed by Drs. Francis M. Rackemann, Boston; Frank Smithies, Chicago; N. F. Thiberge, New Orleans, and John W. Towey, Powers, Mich.

Dr. Walter L. Bierring, Des Moines, Iowa, introduced the lecturer for this year, Dr. William S. Thayer, Baltimore, who read a paper on "Thoughts on Medical Education in the United States."

Dr. Augustus B. Wadsworth, Albany, N. Y., read a paper on "The Value of Serum Therapy in Pneumonia, Meningitis, Scarlet Fever and Other Streptococcus Infections." Discussed by Drs. W. G. Smillie, Boston; Harold L. Amoss, Durham, N. C.; Virgil E. Simpson, Louisville, Ky., and Augustus B. Wadsworth, Albany, N. Y.

Dr. H. Milton Conner, Rochester, Minn., read a paper on "Injection of Liver Extract in the Treatment of Pernicious Anemia." Discussed by Drs. John H. Musser, New Orleans, and H. Milton Conner, Rochester, Minn.

THURSDAY, MAY 12—AFTERNOON

A joint meeting was held with the Section on Preventive and Industrial Medicine and Public Health.

The following papers were read as a symposium on "The Relation of Private Practice to Preventive Medicine":

Dr. Frank G. Boudreau, Geneva, Switzerland: "The Relationship of the Doctor to Society." Discussed by Dr. John L. Morse, Boston.

Dr. Roger I. Lee, Boston: "Preventive Medicine in General Medical Practice." Discussed by Dr. Stewart R. Roberts, Atlanta, Ga.

Dr. J. N. Baker, Montgomery, Ala.: "Organized Medicine and Public Health." Discussed by Dr. H. F. Vaughan, Detroit.

Dr. Morris Fishbein, Chicago: "Present-Day Trends of Private Practice in the United States." Discussed by Dr. E. Starr Judd, Rochester, Minn.

The four papers were discussed by Drs. G. Henry Mundt, Chicago, and J. Cyril Eby, Plaquemine, La.

FRIDAY, MAY 13—AFTERNOON

The following officers were elected: chairman, Dr. Reginald Fitz, Boston; vice chairman, I. I. Lemann, New Orleans; secretary, William J. Kerr, San Francisco; delegate, James S. McLester, Birmingham, Ala.; alternate, J. E. Paullin, Jr., Atlanta, Ga. Executive Committee: Dr. Ernest E. Irons, Chicago; Dr. L. W. Gorham, Albany, N. Y.; Dr. Reginald Fitz, Boston.

Dr. Alexius M. Forster, Colorado Springs, Colo., read a paper on "Nontuberculous Respiratory Diseases." Discussed by Drs. William S. Thayer, Baltimore; Frank Smithies, Chicago, and Alexius M. Forster, Colorado Springs, Colo.

Dr. Eugene S. Kilgore, San Francisco, read a paper on "Treatment of Coronary Thrombosis." Discussed by Drs. I. I. Lemann, New Orleans; William S. Thayer, Baltimore; O. P. J. Falk, St. Louis, and Eugene S. Kilgore, San Francisco.

Dr. G. Gill Richards, Salt Lake City, read the chairman's address, entitled "The Family Doctor and the Pioneer Physician of the West."

Dr. John O. Bower, Philadelphia, read a paper on "The Mortality in Acute Appendicitis." Discussed by Drs. Donald Guthrie, Sayre, Pa.; William E. Robertson, Philadelphia, and John O. Bower, Philadelphia.

Drs. Willard O. Thompson, Chicago, and James H. Means, Boston, presented a paper entitled "A Comparison of Exophthalmic Goiter in Boston and Chicago with Special Reference to the Iodine Reaction." Discussed by Drs. Frank H. Lahey, Boston; Jacob Lerman, Boston; Harry B. Friedgood, Ann Arbor, Mich.; Eugene S. Kilgore, San Francisco, and Willard O. Thompson, Chicago.

Dr. John B. Youmans, Nashville, Tenn., read a paper on "Endemic Nutritional Edema." Discussed by Drs. Roy H. Turner, New Orleans, and John B. Youmans, Nashville, Tenn.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Hubert A. Royster, Raleigh, N. C.

Drs. Eslie Asbury and H. Kennon Dunham, Cincinnati, presented a paper on "Thoracoplasty in Pulmonary Tuberculosis." Discussed by Drs. Alton Ochsner, New Orleans; E. J. O'Brien, Detroit; Frank K. Boland, Atlanta, Ga.; A. M. Forster, Colorado Springs, Colo.; Horace Reed, Oklahoma City, and H. Kennon Dunham, Cincinnati.

Dr. C. R. Edwards, Baltimore, read a paper on "Acute Intestinal Obstruction Due to Mesenteric Defects Requiring Massive Resection." Discussed by Drs. Owen H. Wangensteen, Minneapolis; E. D. Martin, New Orleans; Harold M. Trusler, Indianapolis; Willard Bartlett, Jr., St. Louis, and C. R. Edwards, Baltimore.

The following papers were read as a symposium on "Traumatic and Industrial Surgery":

Dr. Lloyd Noland, Birmingham, Ala.: "Some Problems of Administration in Industrial Surgery."

Dr. Grover C. Penberthy, Detroit: "The Surgeon's Responsibility in the Readjustment of the Injured."

Dr. W. L. Estes, Jr., Bethlehem, Pa.: "After-Care of the Injured."

Dr. E. Dunbar Newell, Chattanooga, Tenn.: "An Outline of the Treatment of Fractures by the General Surgeon."

These four papers were discussed by Drs. George A. Hendon, Louisville, Ky.; Joseph F. Smith, Wausau, Wis.; Willis C. Campbell, Memphis, Tenn.; Wayland Morrison, Los Angeles; Muir Bradburn, New Orleans; John Darrington, Yazoo City, Miss.; Frank Warner, Columbus, Ohio; Robert Carothers, Cincinnati, and W. L. Estes, Jr., Bethlehem, Pa.

A moving picture on fractures was shown by Dr. Robert Carothers, Cincinnati.

THURSDAY, MAY 12—MORNING

Dr. Frank K. Boland, Atlanta, Ga., read a paper on "Results of Treatment in Acute Appendicitis." Discussed by Drs. J. C. A. Gerster, New York; John O. Bower, Philadelphia; Southgate Leigh, Norfolk, Va.; Roland Hill, St. Louis; Harold M. Trusler, Indianapolis; Horace Reed, Oklahoma City; L. F. Barney, Kansas City, Kan., and Frank K. Boland, Atlanta, Ga.

Dr. Alfred W. Adson, Rochester, Minn., read a paper on "Thrombo-Angiitis Obliterans: Results of Sympathectomy." Discussed by Drs. Arthur W. Allen, Boston, and Alfred W. Adson, Rochester, Minn.

Dr. Hubert A. Royster, Raleigh, N. C., read the chairman's address, entitled "Surgical Vision."

Dr. Frederick A. Coller, Ann Arbor, Mich., read a paper on "Dehydration Attendant on Surgical Operations." Discussed by Drs. Thomas G. Orr, Kansas City, Mo.; Isidore Cohn, New Orleans; George A. Hendon, Louisville, Ky.; J. Shelton Horsley, Richmond, Va., and Frederick A. Coller, Ann Arbor, Mich.

Dr. E. Starr Judd, Rochester, Minn., read a paper on "A Study of the Late Results of Operations for Diseases of the Biliary Tract."

Dr. J. Tate Mason, Seattle, read a paper on "The Conservative Treatment of Cholecystitis."

These two papers were discussed by Drs. R. L. Payne, Norfolk, Va.; Frank H. Lahey, Boston; Moses Behrend,

Philadelphia; Willard Bartlett, Jr., St. Louis; I. S. Ravdin, Philadelphia, and J. Tate Mason, Seattle.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. F. W. Rankin, Rochester, Minn.; vice chairman, Dr. Lloyd Noland, Birmingham, Ala.; secretary, Dr. Howard M. Clute, Boston; delegate, Dr. J. Tate Mason, Seattle; alternate, Dr. Frank H. Lahey, Boston.

Dr. Géza de Takáts, Chicago, read a paper on "Surgical Attempts at Increasing Sugar Tolerance." Discussed by Drs. Joseph A. Danna, New Orleans; J. Shirley Sweeney, Dallas, Texas; Seale Harris, Birmingham, Ala., and Géza de Takáts, Chicago.

Dr. G. M. Dorrance, Philadelphia, read a paper on "Essential Factors in the Ideal Cleft Palate Operation." Discussed by Drs. Gordon B. New, Rochester, Minn.; G. V. I. Brown, Milwaukee; Vilray P. Blair, St. Louis, and G. M. Dorrance, Philadelphia.

Dr. Damon B. Pfeiffer, Philadelphia, read a paper on "Anterior Hemipylorosphincterectomy for Duodenal Ulcer and Pylorospasm." Discussed by Drs. Urban Maes, New Orleans; Norman McLeod Allen, Detroit, and Damon B. Pfeiffer, Philadelphia.

Drs. Howard C. Naffziger and Ottiwell Wood Jones, San Francisco, presented a paper on "The Operative Treatment of Progressive Exophthalmos Following Thyroidectomy."

Dr. R. S. Dinsmore, Cleveland, read a paper on "Hyperthyroidism in Children."

Dr. Howard M. Clute, Boston, read a paper on "The Results of Surgery in the Treatment of Exophthalmic Goiter."

These three papers were discussed by Drs. R. E. Semmes, Memphis, Tenn.; E. R. Arn, Dayton, Ohio; Donald Guthrie, Sayre, Pa.; R. M. Howard, Oklahoma City; Willard Bartlett, Jr., St. Louis; Frank H. Lahey, Boston; Howard C. Naffziger, San Francisco; R. S. Dinsmore, Cleveland, and Howard M. Clute, Boston.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

WEDNESDAY, MAY 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Fred L. Adair, Chicago.

Dr. Percy W. Toombs, Memphis, Tenn., read a paper on "Preconceptional and Prenatal Care."

Dr. Alfred C. Beck, Brooklyn, read a paper on "The Management of Normal Labor."

Dr. J. C. Litzenberg, Minneapolis, read a paper on "Preventable Invalidism Following Childbirth."

These three papers were discussed by Drs. Grandison D. Royston, St. Louis; Phil C. Schreier, Memphis, Tenn.; Marie Pichel Levinson, New York; William F. Hewitt, Chicago; F. J. Schatz, St. Cloud, Minn.; Percy W. Toombs, Memphis, Tenn.; Alfred C. Beck, Brooklyn, and J. C. Litzenberg, Minneapolis.

Dr. Everett D. Plass, Iowa City, read a paper on "The Difficulties and Dangers of Forceps Deliveries."

Dr. W. E. Studdiford, New York, read a paper on "Breech Presentations and Their Delivery."

Dr. W. R. Cooke, Galveston, Texas, read a paper on "Contraindications to Cesarean Section."

These three papers were discussed by Drs. Edward L. King, New Orleans; Edward A. Schumann, Philadelphia; Grandison D. Royston, St. Louis; P. Brooke Bland, Philadelphia; H. G. Dorman, Beirut, Syria; J. Bay Jacobs, Washington, D. C.; E. D. Plass, Iowa City; W. E. Studdiford, New York, and W. R. Cooke, Galveston, Texas.

THURSDAY, MAY 12—AFTERNOON

Dr. John T. Williams, Boston, read a paper on "The Relation of Respiratory Infections to Puerperal Infection." Discussed by Drs. Phillips John Carter, New Orleans; F. J. Schatz, St. Cloud, Minn., and John T. Williams, Boston.

Dr. P. Brooke Bland, Philadelphia, read a paper on "The Prevention of Maternal Injury Incident to Pregnancy and Labor from the Standpoint of the General Practitioner." Discussed by Drs. J. L. Baer, Chicago, and P. Brooke Bland, Philadelphia.

Dr. Fred L. Adair, Chicago, read the chairman's address, entitled "The Interrelationship of Mother and Fetus."

Dr. C. B. Upshaw, Atlanta, Ga., read a paper on "The Conservative Treatment of Eclampsia."

Dr. James C. Janney and Miss Elizabeth W. Walker, Boston, presented a paper on "Kidney Function in Pregnancy."

Dr. A. W. Rowe, Boston, read a paper on "The Toxemias of Pregnancy."

These three papers were discussed by Drs. E. L. King, New Orleans; Milton Smith Lewis, Nashville, Tenn.; Phil C. Schreier, Memphis, Tenn.; E. D. Plass, Iowa City; C. B. Upshaw, Atlanta, Ga.; James C. Janney, Boston, and A. W. Rowe, Boston.

Dr. George D. Huff, San Diego, Calif., read a paper on "Technic of Spinal Anesthesia in Lower Abdominal Surgery and Obstetrics." Discussed by Drs. John S. Lundy, Rochester, Minn.; H. G. Dorman, Beirut, Syria; J. B. Stoll, Fontanelle, Iowa, and George D. Huff, San Diego, Calif.

FRIDAY, MAY 13—AFTERNOON

The Committee on Maternal Welfare reported activity in connection with the White House Conference on Child Health and Protection. The volume on Obstetric Education has been published, and other manuscripts are now in the hands of the publishers. The members of the committee have been active in this work. The committee recommended that it be continued and that its activities be carried out in cooperation with the other organization represented on the Joint Committee for Maternal Welfare. It further recommended that the section sanction the incorporation of the Joint Committee on Maternal Welfare without the assumption of any financial responsibility by the section. The purpose of this committee is to further maternal welfare and to improve conditions surrounding maternity through the leadership of the medical profession.

On motion by Dr. Emil Novak, Baltimore, seconded by Dr. Arthur H. Curtis, Chicago, the report was adopted.

Dr. J. C. Litzenberg, Minneapolis, described the work of the American Board of Obstetrics and Gynecology.

The following officers were elected: chairman, Dr. Barton Cooke Hirst, Philadelphia; vice chairman, Dr. Willard R. Cooke, Galveston, Texas; secretary, Dr. James R. McCord, Atlanta, Ga.; delegate, Dr. Arthur H. Curtis, Chicago; alternate, Dr. Carl Henry Davis, Milwaukee.

Dr. W. H. Bueermann, Portland, Ore., read a paper on "Vaginal Enterocele."

Dr. James C. Masson, Rochester, Minn., read a paper on "Consideration of Prolapse, Cystocele, Rectocele and True Vaginal Hernia."

These two papers were discussed by Drs. Harold E. Simon, Birmingham, Ala., and W. H. Bueermann, Portland, Ore.

Dr. Arthur H. Curtis, Chicago, read a paper on "Adhesions of the Anterior Surface of the Liver." Discussed by Drs. Hilliard E. Miller, New Orleans; J. P. Pratt, Detroit, and Arthur H. Curtis, Chicago.

Dr. T. E. Jones, Cleveland, read a paper on "Cancer of the Cervix: A Review of Three Hundred and Seventy-Five Cases." Discussed by Drs. W. P. Healy, New York; L. Wallace Frank, Louisville, Ky., and James E. Davis, Detroit.

Drs. Emil Novak and S. M. R. Reynolds, Baltimore, presented a paper on "The Cause of Primary Dysmenorrhea, with Especial Reference to Hormonal Factors." Discussed by Drs. C. Jeff Miller, New Orleans; J. P. Pratt, Detroit, and Emil Novak, Baltimore.

SECTION ON OPHTHALMOLOGY

WEDNESDAY, MAY 11—MORNING

At the suggestion of the chairman, Dr. Harry Friedenwald, Baltimore, and on motion of Dr. Harry S. Gradle, duly seconded and carried, a committee consisting of Drs. Edward Jackson, William H. Wilder, Hunter H. McGuire, Joseph S. Lichtenberg, Arthur J. Bedell, Harry S. Gradle, Parker Heath and Harry Friedenwald was appointed to lay a wreath on the grave of the late Dr. Marcus Feingold, in token of the respect, esteem and affection of the members of the section.

Dr. Harry Friedenwald, Baltimore, read the chairman's address, entitled "The Progress of Ophthalmology."

Dr. Conrad Berens, New York, read a paper on "Resection Operation for Strabismus." Discussed by Drs. Luther C. Peter, Philadelphia; W. Thornwall Davis, Washington, D. C.; Walter B. Lancaster, Boston; Otis Wolfe, Marshalltown, Iowa, and Conrad Berens, New York.

Dr. Harry S. Gradle, Chicago, read a paper on "The Reaction Time of the Normal Pupil." Discussed by Drs. Charles A. Bahn, New Orleans; Edward B. Heckel, Pittsburgh, and Harry S. Gradle, Chicago.

Dr. William C. Finnoff, Denver, read a paper on "A Syndrome in Uveal Tuberculosis." Discussed by Drs. Ralph I. Lloyd, Brooklyn; Albert E. Bulson, Fort Wayne, Ind.; H. L. Hilgartner, Austin, Texas; Arthur J. Bedell, Albany, N. Y.; Jonas Friedenwald, Baltimore; Eugene R. Lewis, Los Angeles; Harry S. Gradle, Chicago; Sanford R. Gifford, Chicago; Sylvester J. Beach, Portland, Maine; William H. Crisp, Denver; T. B. Holloway, Philadelphia, and William C. Finnoff, Denver.

Dr. Arthur J. Bedell, Albany, N. Y., read a paper on "The Significance of Choroidal Hemorrhage." Discussed by Drs. Everett L. Goar, Houston, Texas, and William H. Wilder, Chicago.

Dr. Hunter H. McGuire, Winchester, Va., read a paper on "Gyrate Atrophy of the Choroid and Retina (Fuchs)." Discussed by Dr. T. B. Holloway, Philadelphia.

THURSDAY, MAY 12—MORNING

Dr. Herbert Moulton, Fort Smith, Ark., exhibited specimens of choroidal sarcoma, shown later on the screen in connection with his paper.

Dr. Conrad Berens, New York, exhibited an eye speculum and a hand campimeter. (Description and cuts attached.)

Dr. Edward Jackson exhibited, for Dr. James M. Shields, Denver, a series of large photographs of specimens worked out from slides from the Clinic of Professor Fuchs, some furnished by Dr. Prentiss and some from the University of Iowa, illustrating the value of the large photograph in fixing the anatomy in the mind. These pictures showed:

1. The optic nerve entrance in a case of opaque nerve fibers.
2. A section showing the angle of the anterior chamber.
3. A section showing the retina with all its layers.
4. A further enlargement of the retina showing the rods and cones and their nuclei.

Dr. Jonas Friedenwald, Baltimore, presented a new ophthalmoscope.

Dr. John Green, Jr., St. Louis, exhibited epinephrine bitartrate powder. Also the 0.06 cross-cylinder.

Dr. Sanford R. Gifford, Chicago, exhibited cross-action iris forceps.

Dr. Derrick T. Vail, Jr., Cincinnati, exhibited an ingni-puncture conjunctival retractor.

Dr. Thomas D. Allen, Chicago, exhibited a modification of the well known instrument for implanting bone spheres into the orbit and muscle cone. In this instrument the size of the wires is increased, and there is a little slot at the bottom of the plunger so a muscle hook may be introduced, pressing on the bone sphere while the instrument is removed and the sutures tied.

Drs. Lloyd Mills and George Martyn, Los Angeles, presented a paper on "Urinary Proteose in Ocular Allergy." Discussed by Drs. Richard W. Whitehead, Denver; J. W. Jervey, Greenville, S. C.; George Piness, Los Angeles; Laura Lane, Minneapolis; Eugene R. Lewis, Los Angeles; Alan C. Woods, Baltimore; George W. Jean, Santa Barbara, Calif.; Edwin N. Robertson, Concordia, Kan.; Jonas Friedenwald, Baltimore, and George Martyn, Los Angeles.

Dr. Grady E. Clay, Atlanta, Ga., read a paper on "Angioid Streaks of the 'Retina' Associated with Pseudoxanthoma Elasticum: A Report of Seven Cases." Discussed by Drs. W. E. Fry, Philadelphia; Arthur J. Bedell, Albany, N. Y.; Jack Jones, Atlanta, Ga.; D. T. Vail, Jr., Cincinnati; Walter B. Lancaster, Boston, and Grady E. Clay, Atlanta, Ga.

Dr. Sanford R. Gifford, Chicago, read a paper on "The Permeability of the Normal and Pathologic Lens System: A Preliminary Report." Discussed by Drs. D. T. Vail, Jr., Cincinnati; Jonas Friedenwald, Baltimore, and Sanford R. Gifford, Chicago.

Dr. W. L. Benedict, Rochester, Minn., read a paper on "Foreign Proteins and Gold in the Treatment of Uveitis." Discussed by Drs. George Slocum, Ann Arbor, Mich.; Alan C. Woods, Baltimore, and W. L. Benedict, Rochester, Minn.

Dr. Edward Jackson, Denver, read a paper on "Aberrations of Eye and Lenses." Discussed by Dr. Henry C. Haden, Houston, Texas.

Dr. William T. Davis, Washington, D. C., read a paper on "Metastatic Carcinoma of the Optic Disk: Report of a Case." Discussed by Drs. George F. Suker, Chicago, and W. L. Benedict, Rochester, Minn.

Drs. Herbert Moulton and E. C. Moulton, Fort Smith, Ark., presented a paper on "Sarcoma of the Choroid: History of Six Cases with Early Operation." Discussed by Drs. Mary Knight Asbury, Cincinnati; Laura Lane, Minneapolis; Edward Jackson, Denver, and E. C. Moulton, Fort Smith, Ark.

Dr. Alan C. Woods, Baltimore, read a paper on "Uveal Pigment Hypersensitivity and Therapeusis." Discussed by Drs. Parker Heath, Detroit, and Jonas Friedenwald, Baltimore.

FRIDAY, MAY 13—MORNING

The reports of the Committee on Compensation Tables, the Committee on the Knapp Testimonial Fund and the Committee on National Museum of Ophthalmic Pathology were published in the presession volume.

The report of the Committee on Optics and Visual Physiology was presented by Dr. Edward Jackson, Chairman.

Drs. Clifford B. Walker, Los Angeles, Bernard Samuels, New York, and F. Phinizy Calhoun, Atlanta, Ga., were elected members of the Committee on Awarding the Knapp Medal.

Dr. John Green, St. Louis, presented the report of the American Board for Ophthalmic Examinations, which was accepted.

Dr. William C. Finnoff, Denver, presented the report of the Committee to Cooperate with the National Society for the Prevention of Blindness. The report was accepted and the committee continued.

The secretary stated that in the report of the Committee on Scientific Exhibit, published in the presession volume, Dr. Bahn's name which came in too late for publication, should have been included.

Dr. Walter B. Lancaster, Chairman, presented the report of the Committee to Confer with the National Conference on Nomenclature of Disease. On motion, duly seconded, the report was received and the committee continued.

Dr. William H. Crisp, Delegate, made his report, which was accepted.

Dr. T. B. Holloway presented the report of the Executive Committee. On motion of Dr. W. B. Lancaster, seconded by Dr. Edward Jackson, the report was accepted.

The following officers were elected: chairman, Dr. F. H. Verhoeff, Boston; vice chairman, Dr. Charles A. Bahn, New Orleans; secretary, Dr. Parker Heath, Detroit; to the American Board for Ophthalmic Examination, Dr. John Green, St. Louis; to the Committee on Optics and Visual Physiology, Dr. Alfred Cowan, Philadelphia; chairman of Committee to Cooperate with National Society for the Prevention of Blindness, Dr. T. B. Holloway, Philadelphia.

The Executive Committee stated that no award was being made for ophthalmic research in the American Medical Association this year.

At the suggestion of Dr. T. B. Holloway, the members of the section stood for one minute in memory of Dr. George S. Derby.

The chairman announced that Dr. W. H. Luedde, vice chairman of the section, who had been seriously ill, was recovering.

Drs. John Green, Jr., and Carl C. Beisbarth, St. Louis, presented a paper on "Inexpert Refraction." Discussed by Drs. William H. Crisp, Denver; C. W. Rutherford, Iowa City; Laura Lane, Minneapolis; E. L. Jones, Cumberland, Md.; Hans Schroeder, New Orleans; S. B. Muncaster, Washington, D. C.; Thomas D. Allen, Chicago, and John Green, Jr., St. Louis.

Dr. C. W. Rutherford, Iowa City, read a paper on "Asthenopia, a Psychoneurosis and a Medical Responsibility." Dis-

cussed by Drs. Walter B. Lancaster, Boston; Hans Schroeder, New Orleans, and C. W. Rutherford, Iowa City.

Dr. Louis Bothman, Chicago, read a paper entitled "Further Report on the Relation of the Basal Metabolic Rate to Progressive Myopia." Discussed by Drs. W. R. Buffington, New Orleans, Meyer Weiner, St. Louis; and Louis Bothman, Chicago.

Dr. Jonas Friedenwald and Eugene Chan, Baltimore, presented a paper on "The Pathogenesis of Retinitis Pigmentosa, with a Note on the Phagocytic Activity of Müller's Fibers." Discussed by Drs. F. Herbert Haessler, Milwaukee; Parker Heath, Detroit; S. B. Muncaster, Washington, D. C., and Jonas Friedenwald, Baltimore.

Dr. Vilray P. Blair, St. Louis, showed slides illustrating "Repairs and Adjustments of the Eyelids." No discussion.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Wednesday, May 11—Afternoon

The meeting was called to order by the chairman, Dr. Gabriel Tucker, Philadelphia.

Dr. Gabriel Tucker, Philadelphia, read the chairman's address, entitled "The Infant Larynx."

The following applications for Associate Fellowship in the section were read, and as the secretary announced that the qualifications of the applicants were satisfactory, on motion, duly seconded, they were nominated for Associate Fellowship: G. Victor Boyke, D.D.S., Paterson, N. J.; Charles T. Gilden, Jr., D.D.S., Philadelphia; E. Alan Lieban, D.D.S., New York.

Drs. Chevalier Jackson and Chevalier L. Jackson, Philadelphia, presented a paper on "Benign Tumors of the Trachea and Bronchi, with Especial Reference to Those of Inflammatory Origin." Discussed by Drs. Joseph C. Beck, Chicago; Thomas E. Carmody, Denver; Frank W. Konzelmann, Philadelphia; Eugene R. Lewis, Los Angeles, and Chevalier Jackson, Philadelphia.

Dr. L. W. Dean, St. Louis, read a paper on "Laboratory Investigations as an Aid in Otolaryngologic Diagnosis." Discussed by Drs. Harris P. Mosher, Boston; Burt R. Shurly, Detroit; I. S. Kahn, San Antonio, Texas; George Piness, Los Angeles, and L. W. Dean, St. Louis.

Drs. Gordon B. New and Eleanor M. Fletcher, Rochester, Minn., presented a paper on "The Selection of Treatment in Carcinoma of the Larynx." Discussed by Drs. Albert C. Broders, Rochester, Minn.; William V. Mullin, Cleveland; Joseph C. Beck, Chicago, and Gordon B. New, Rochester, Minn.

Dr. John D. Kernan, New York, read a paper on "The Treatment of Carcinoma of the Bronchus with Radon Implantations and Diathermy."

Dr. M. F. Arbuckle, St. Louis, read a paper on "The Use of Radon Seeds in the Field of Otolaryngology and Endoscopy, with Case Reports."

These two papers were discussed by Drs. Henry K. Pancoast, Philadelphia; F. E. LeJeune, New Orleans; George Taquino, New Orleans; G. W. Walker, Fresno, Calif.; John D. Kernan, New York, and M. F. Arbuckle, St. Louis.

Thursday, May 12—Afternoon

This being the first anniversary of the death of Dr. Robert C. Lynch, the section stood in silence for one minute in his memory, and the secretary announced that flowers had been sent to Mrs. Lynch.

Dr. Eugene R. Lewis, Los Angeles, read a paper on "Biochemical Aspects of Nasal Sinus Problems." Discussed by Drs. D. C. Jarvis, Barre, Vt.; Paul R. Nemours, St. Louis; James W. Jervey, Greenville, S. C., and Eugene R. Lewis, Los Angeles.

Dr. O. Jason Dixon, Kansas City, Mo., read a paper on "A Departure in the Management of Thrombophlebitis on Experimental Studies in the Dog." Discussed by Drs. George M. Coates, Philadelphia; Robert F. Ridpath, Philadelphia; Ernest M. Seydell, Wichita, Kan., and O. Jason Dixon, Kansas City, Mo.

Dr. J. A. Babbitt, Philadelphia, read a paper on "Some Studies in Middle Ear Infection." Discussed by Drs. John Raymond Hume, New Orleans; A. G. Fort, Atlanta, Ga., and J. A. Babbitt, Philadelphia.

Dr. Ralph A. Fenton, Portland, Ore., read a paper on "Local Agents Which Increase Tissue Immunity in Sinus Mucosa." Discussed by Drs. Arthur W. Proetz, St. Louis; Hugh L. McLaurin, Dallas, Texas; Robert F. Ridpath, Philadelphia, and Ralph A. Fenton, Portland, Ore.

Dr. H. Marshall Taylor, Jacksonville, Fla., read a paper on "Hygiene of Swimming." Discussed by Drs. Austin A. Hayden, Chicago; Harvey B. Searcy, Tuscaloosa, Ala.; Homer Dupuy, New Orleans; John J. Shea, Memphis, Tenn.; J. A. Babbitt, Philadelphia, and H. Marshall Taylor, Jacksonville, Fla.

Friday, May 13—Afternoon

The following officers were elected: Chairman, Dr. Harris P. Mosher, Boston; vice chairman, Dr. J. L. Myers, Kansas City, Mo.; secretary, Dr. John J. Shea, Memphis, Tenn.; executive committee, Drs. Thomas E. Carmody, Denver; Gabriel Tucker, Philadelphia, and Harris P. Mosher, Boston; delegate, Dr. Burt R. Shurly, Detroit; alternate, Dr. John W. Carmack, Indianapolis.

Dr. Gabriel Tucker, Philadelphia, exhibited an infant bronchoscope and an infant tracheotomy tube.

Dr. J. B. Nail, Wichita Falls, Texas, exhibited an adaptation of the Davis mouth gag to the Lynch laryngeal speculum, enabling the operator to secure exposure of the larynx.

Dr. Arthur W. Proetz, chairman, presented the report of the Committee on Necrology.

Dr. Chevalier Jackson, chairman, presented the report of the Committee on Lye Legislation.

On motion of Dr. A. R. Crebbin, New Orleans, duly seconded, the report was accepted and the committee was thanked and continued.

In presenting the report of the Examining Board in Otolaryngology, Dr. Joseph C. Beck stated that since the board was formed in 1924 it had held twenty-one examinations and that the number of certified members was 1,933. Dr. Beck moved that the report be accepted and the committee continued; the motion was seconded and carried.

Dr. H. M. Taylor, chairman, presented the report of the Committee on Otorhinologic Hygiene of Swimming. On motion of Dr. Dupuy, duly seconded, the report was received and the committee was thanked and continued.

In presenting the report of the Committee to Confer with the National Inter-Society on Deafness Prevention, Dr. Austin A. Hayden, chairman, stated that largely because of the financial difficulties in which the American Federation of Organizations for the Hard of Hearing had found itself in the past year, little had been done by the committee. On motion, duly seconded, the report of progress was received and the committee was thanked and continued.

Dr. Ernest M. Seydell, Wichita, Kan., read a paper on "Disturbances of Olfaction." Discussed by Drs. Claude L. La Rue, Shreveport, La.; George B. Collier, New Orleans; William D. Gill, San Antonio, Texas, and Ernest M. Seydell, Wichita, Kan.

Dr. John W. Carmack, Indianapolis, read a paper on "After-Care of the Radical Mastoid Operation." Discussed by Drs. Joseph C. Beck, Chicago, and John W. Carmack, Indianapolis.

Dr. C. C. Cody, Houston, Texas, read a paper on "Acute Suppurative Otitis Media in Infancy and Early Childhood." Discussed by Drs. M. A. Lischkoff, Pensacola, Fla.; W. A. Wagner, New Orleans; J. W. Jervey, Greenville, S. C.; Burt R. Shurly, Detroit, and C. C. Cody, Houston, Texas.

Dr. J. L. Myers, Kansas City, Mo., read a paper on "Electrocoagulation of Tonsils." Discussed by Drs. Philip Boebinger, New Orleans; Frederick B. Balmer, Chicago; Austin A. Hayden, Chicago, and J. L. Myers, Kansas City, Mo.

Dr. Murdock S. Equen, Atlanta, Ga., read a paper entitled "A Clinical Study of Appendicitis Following Tonsillectomy." Discussed by Drs. Charles A. McWilliams, Gulfport, Miss.; S. S. Evans, Memphis, Tenn., and Murdock S. Equen, Atlanta, Ga.

SECTION ON PEDIATRICS

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9:05 by the chairman, Dr. Jay I. Durand, Seattle.

Dr. Jay I. Durand, Seattle, read the chairman's address, entitled "Progress in the Nutrition of Infants."

Dr. George M. Retan, Syracuse, N. Y., read a paper on "Forced Spinal Drainage in Its Relation to Infections of the Central Nervous System." Discussed by Drs. H. Ward Williams, Rochester, N. Y.; B. H. Balser, Syracuse, N. Y., and George M. Retan, Syracuse, N. Y.

Drs. Béla Schick and Samuel Karelitz, New York, presented a paper on "Treatment of Alimentary Toxicosis." Discussed by Drs. Horton R. Casparis, Nashville, Tenn.; C. Ulysses Moore, Portland, Ore.; Harry Lowenburg, Philadelphia; F. J. Schatz, St. Cloud, Minn., and Béla Schick, New York.

Dr. Sidney V. Haas, New York, read a paper on "Celiac Disease: Its Specific Treatment and Cure Without Nutritional Relapse." Discussed by Drs. John Signorelli, New Orleans; John L. Morse, Boston; Charles G. Kerley, New York, and Sidney V. Haas, New York.

Dr. James W. Bruce, Louisville, Ky., read a paper on "Prognosis of Tuberculosis in Infancy."

Dr. Horton R. Casparis, Nashville, Tenn., read a paper on "The Pediatrician's Responsibility in the Tuberculosis Problem."

These two papers were discussed by Drs. O. O. Miller, Louisville, Ky.; William H. Park, New York; Béla Schick, New York; W. Ambrose McGee, Richmond, Va.; Eli Friedman, Boston; James W. Bruce, Louisville, Ky., and Horton R. Casparis, Nashville, Tenn.

THURSDAY, MAY 12—MORNING

Dr. M. G. Peterman, Milwaukee, read a paper on "Convulsions in Childhood." Discussed by Drs. Harry Lowenburg, Philadelphia, and M. G. Peterman, Milwaukee.

Drs. Louis A. Lurie and J. Victor Greenebaum, Cincinnati, presented a paper on "Pituitary Medication in the Treatment of Abnormal Mental and Physical Conditions in Childhood." Discussed by Drs. Isaac A. Abt, Chicago, and J. Victor Greenebaum, Cincinnati.

Dr. Charles G. Kerley, New York, read a paper on "Intestinal Stasis in Children." Discussed by Drs. Maud Loeber, New Orleans; Joseph S. Wall, Washington, D. C.; C. Ulysses Moore, Portland, Ore., and Charles G. Kerley, New York.

Dr. W. Lloyd Aycock, Boston, read a paper on "The Problem of the Control of Poliomyelitis." Discussed by Drs. Edward B. Shaw, San Francisco; S. D. Kramer, Boston; A. C. Silverman, Syracuse, N. Y.; Claus W. Jungeblut, New York, and W. Lloyd Aycock, Boston.

Dr. Henry F. Helmholz, Rochester, Minn., read a paper on "The Ketogenic Diet in the Treatment of Pyuria in Childhood." Discussed by Drs. Clifford G. Grulee, Chicago; Fred W. Schlutz, Chicago; Harry Lowenburg, Philadelphia; C. Ulysses Moore, Portland, Ore., and Henry F. Helmholz, Rochester, Minn.

Drs. Fred W. Schlutz and Dorothy Fetter, Chicago, presented a paper on "The Influence of Various Milk Products and Processed Milk on Gastric Motility." Discussed by Dr. L. R. De Buys, New Orleans.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. Fred W. Schlutz, Chicago; vice chairman, Dr. M. G. Peterman, Milwaukee; secretary, Dr. Alfred A. Walker, Birmingham, Ala.; delegate, Dr. Isaac A. Abt, Chicago; alternate, Dr. A. Graeme Mitchell, Cincinnati. Executive Committee, Drs. Fred W. Schlutz, Chicago; Jay I. Durand, Seattle, and Dr. C. A. Aldrich, Winnetka, Ill.; representative on Scientific Exhibit, Dr. F. Thomas Mitchell, Memphis, Tenn.

Drs. William Weston, Columbia, S. C., Henry F. Helmholz, Rochester, Minn., and John L. Morse, Boston, were appointed to represent the section at the third International Pediatric Congress, to be held in London in 1933.

The following resolution was endorsed by the section and referred to the Committee on Foods of the American Medical Association:

> At the business meeting of the Pediatrics Section of the California Medical Association held Tuesday, May 3, 1932, the following resolution was passed:
>
> "The Section on the Diseases of Children respectfully asks the council of the California Medical Association to strongly urge the Association of Certified Milk Producers to oppose the certification of soft curd milk and milk containing added vitamin and mineral content.
>
> "It is further requested that a copy of this resolution be forwarded to the secretary of the Section on Pediatrics of the American Medical Association."

Dr. Frank C. Neff, Kansas City, Mo., presented the report of the Jacobi Fund Committee.

Dr. Harold K. Faber, San Francisco, retired from the Jacobi Fund Committee, and Dr. Jay I. Durand, Seattle, automatically became a member for a four-year term.

On motion regularly made and seconded, the report of the Jacobi Fund Committee was adopted.

Dr. Isaac A. Abt, Chicago, reported that the House of Delegates passed the necessary amendment to the By-Laws so that hereafter the section will be known as the Section on Pediatrics in place of the Section on Diseases of Children.

Resolutions on the death of Dr. Stafford McLean were presented by Dr. Frank Leech, Washington, D. C., and on the death of Dr. John Brown Manning by Dr. Oscar Reiss, Los Angeles.

The following resolution, presented by Dr. Joseph A. Henske, Omaha, was adopted:

> In view of the place of pediatrics in the medical curriculum of class A medical schools and its importance in practice, the Section on Pediatrics of the American Medical Association requests that the National Board of Medical Examiners consider the inclusion of a requirement in their examinations so that pediatrics will be considered as a major subject.

The following resolution, presented by the Executive Committee, was adopted:

> *Resolved*, By the Section on Pediatrics, that the thanks of the section be extended to the local profession of New Orleans, particularly to Dr. John Signorelli and Dr. Robert A. Strong of the pediatric group.

Dr. M. Hines Roberts, Atlanta, Ga., read a paper on "Studies in Congenital Syphilis." Discussed by Drs. Hugh McCulloch, St. Louis; Joseph Yampolsky, Atlanta, Ga., and M. Hines Roberts, Atlanta, Ga.

Dr. I. Newton Kugelmass, New York, read a paper on "The Management of Hemorrhagic Problems in Infancy and Childhood." Discussed by Drs. Heyworth N. Sanford, Chicago, and I. Newton Kugelmass, New York.

Drs. William W. Anderson, Atlanta, Ga., and Robert L. Ware, Philadelphia, presented a paper on "Sickle Cell Anemia." Discussed by Drs. George S. Graham, Birmingham, Ala., and Thomas B. Cooley, Detroit.

Drs. Hugh L. Dwyer and Frank C. Neff, Kansas City, Mo., presented a paper on "Complemental Feeding in the New-Born: Its Effect on Breast Feeding." Discussed by Drs. J. H. Eugene Rosamond, Memphis, Tenn.; Robert A. Strong, New Orleans; Milton S. Lewis, Nashville, Tenn.; Béla Schick, New York; C. Ulysses Moore, Portland, Ore.; F. J. Schatz, St. Cloud, Minn., and Hugh L. Dwyer, Kansas City, Mo.

Dr. F. Thomas Mitchell and Stephen W. Coley, Memphis, Tenn., presented a paper on "A Study in the Prevention of Rickets." Discussed by Drs. Charles J. Bloom, New Orleans; William Weston, Columbia, S. C.; J. Victor Greenebaum, Cincinnati; Martha M. Eliot, New Haven, Conn., and F. Thomas Mitchell, Memphis, Tenn.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9:05 by the chairman, Dr. R. L. Levy, New York.

Drs. George R. Herrmann, C. T. Stone, W. W. Bondurant and E. H. Schwab, Galveston, Texas, presented a paper on "Some Studies of Diuresis in Patients with Congestive Heart Failure." Discussed by Drs. Willard O. Thompson, Chicago, and George R. Herrmann, Galveston, Texas.

Dr. Charles M. Gruber and Isaac Y. Olch, St. Louis, presented a paper on "Myocarditis in Rabbits Produced Experimentally by Drugs." Discussed by Drs. John H. Musser, New Orleans; E. S. Kilgore, San Francisco, and Charles M. Gruber, St. Louis.

Dr. John J. Sampson, San Francisco, and Evelyn M. Anderson, Montreal, presented a paper on "The Treatment of Certain Cardiac Arrhythmias with Potassium Salts." Discussed by Drs. T. R. Harrison, Nashville, Tenn.; Louis F. Bishop, New York; J. Marion Read, San Francisco; William J. Kerr, San Francisco, and John J. Sampson, San Francisco.

Dr. Charles W. Barrier, Fort Worth, Texas, read a paper on "The Effect of Digitalis in Arrhythmias Other Than Flutter and Fibrillation of the Auricles." Discussed by Drs. Wallace M. Yater, Washington, D. C.; Louis F. Bishop, Jr., New York; W. E. Garrey, Nashville, Tenn., and Charles W. Barrier, Fort Worth, Texas.

Drs. Stewart R. Roberts, Atlanta, Ga., and Shelton P. Sanford, Savannah, Ga., presented a paper on "A Clinical Sign of Right Bundle Branch Block, with Remarks on the Disturbance of the Mechanism, the Results and Treatment." Discussed by Dr. Louis F. Bishop, New York.

Dr. J. S. McLester, Birmingham, Ala., read a paper on "The Diet in Bright's Disease." Discussed by Drs. W. B. Penney, Tacoma, Wash.; W. E. Garrey, Nashville, Tenn., and J. S. McLester, Birmingham, Ala.

THURSDAY, MAY 12—MORNING

Dr. L. Minor Blackford, Atlanta, Ga., read a paper on "Bismuth and the Treatment of Cardiovascular Syphilis." Discussed by Drs. Stewart R. Roberts, Atlanta, Ga.; William H. Goeckermann, Rochester, Minn.; Louis F. Bishop, Jr., New York, and L. Minor Blackford, Atlanta, Ga.

Dr. R. L. Levy, New York, read the chairman's address, entitled "Therapeutics and Medicine."

The following papers were read as a symposium on "Anesthesia":

Dr. Frank H. Lahey, Boston: "Advances in Anesthesia from the Standpoint of the Surgeon."

Dr. V. E. Henderson, Toronto: "The Practical Aspect of the Theories of Narcosis."

Drs. M. H. Seevers and R. M. Waters, Madison, Wis.: "Respiratory and Circulatory Changes During Spinal Anesthesia."

Dr. John S. Lundy, Rochester, Minn.: "Advances in Anesthesia from the Standpoint of the Anesthetist."

These four papers were discussed by Drs. J. T. Halsey, New Orleans; E. Starr Judd, Rochester, Minn.; A. M. Caine, New Orleans; H. M. Trusler, Indianapolis; M. H. Seevers, Madison, Wis., and John S. Lundy, Rochester, Minn.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. E. M. K. Geiling, Baltimore; vice chairman, Dr. John H. Musser, New Orleans; delegate, Dr. N. M. Keith, Rochester, Minn.; alternate, Dr. Cary Eggleston, New York; secretary, Dr. C. H. Greene, Rochester, Minn.

Dr. Henry J. John, Cleveland, read a paper on "Ten Years' Study and Follow Up of Cases of Hyperthyroidism Showing Carbohydrate Metabolism Disturbances." No discussion.

Drs. Frank A. Hartman, Clayton W. Greene, Byron D. Bowen and George W. Thorn, Buffalo, presented a paper on "Further Experience with Cortin Therapy." Discussed by Drs. A. W. Rowe, Boston; C. H. Greene, Rochester, Minn.; J. T. Halsey, New Orleans, and Frank A. Hartman, Buffalo.

Drs. J. P. Sanders, Caspiana, La., and W. T. Dawson, Galveston, Texas, presented a paper on "Efficacy of Quinidine in Malaria." Discussed by Dr. W. J. Sandidge, Shreveport, La.

Drs. Paul D. Lamson, Harold W. Brown and Charlotte B. Ward, Nashville, Tenn., presented a paper on "Some Therapeutic and Practical Considerations on the Use of Anthelmintics." Discussed by Drs. W. G. Smillie, Boston, and Paul D. Lamson, Nashville, Tenn.

Drs. W. J. Merle Scott and John J. Morton, Rochester, N. Y., presented a paper on "The Principles of Treatment in the Common Arterial Diseases of the Extremities." Discussed by Drs. Rudolph Matas, New Orleans; Edgar V. Allen, Rochester, Minn.; A. W. Allen, Boston; Alfred W. Adson, Rochester, Minn., and W. J. Merle Scott, Rochester, N. Y.

SECTION ON PATHOLOGY AND PHYSIOLOGY

WEDNESDAY, MAY 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. J. Harvey Black, Dallas, Texas.

On a motion, regularly made and seconded, the following were nominated for Associate Fellowship in the section, for submission to the House of Delegates:

John F. Fulton, New Haven, Conn.
W. C. Langston, University of Arkansas, Little Rock.
E. R. Le Count, University of Chicago, Chicago.
J. M. Looney, Philadelphia.
Walter F. Taylor, Baylor University, Dallas, Texas.
Robert S. Cunningham, Vanderbilt University, Nashville, Tenn.

Dr. Carroll L. Birch, Chicago, read a paper on "Hemophilia." Discussed by Drs. Frank J. Heck, Rochester, Minn.; Owen H. Wangensteen, Minneapolis; Robert Kapsinow, Lafayette, La.; J. H. Woolsey, San Francisco, and Carroll L. Birch, Chicago.

Dr. Henry N. Harkins, Chicago, read a paper on "Granulopenia and Agranulocytic Angina." Discussed by Drs. Clyde Brooks, New Orleans; Merton M. Minter, San Antonio, Texas; Oliver W. Hill, Knoxville, Tenn., and Henry N. Harkins, Chicago.

Dr. Russell L. Haden, Cleveland, read a paper on "Simple Achlorhydric Anemia." Discussed by Drs. A. C. Ivy, Chicago; H. M. Conner, Rochester, Minn., and Russell L. Haden, Cleveland.

Dr. Max Cutler, Chicago, read a paper on "Relation of 'Chronic Mastitis' to Cancer of the Breast." Discussed by Drs. Ira H. Lockwood, Kansas City, Mo.; Charles F. Geschickter, Baltimore; William H. Harris, New Orleans, and Max Cutler, Chicago.

Dr. Charles F. Geschickter, Baltimore, read a paper on "Tumors of the Kidneys." Discussed by Drs. Alvin G. Foord, Pasadena, Calif., and Charles F. Geschickter, Baltimore.

Dr. Albert C. Broders, Rochester, Minn., read a paper on "Carcinoma in Situ Contrasted with Benign Penetrating Epithelium." Discussed by Dr. Max Cutler, Chicago.

Drs. John G. Mateer and F. W. Hartman, Detroit, presented a paper on "Carcinoma of the Duodenum: Clinical and Pathologic Aspects." Discussed by Drs. George B. Eusterman, Rochester, Minn.; Alfred S. Giordano, South Bend, Ind., and John G. Mateer, Detroit.

THURSDAY, MAY 12—AFTERNOON

The following papers were read as a symposium on "Poliomyelitis":

Dr. S. D. Kramer, Boston: "Immunity to Poliomyelitis: The Mechanism of Its Production in the General Population."

Dr. Harold L. Amoss, Durham, N. C.: "Etiology and Pathology."

Dr. J. E. Gordon, Detroit: "The Diagnosis of Early Poliomyelitis."

Dr. William H. Park, New York: "The Therapeutic Use of Antipoliomyelitis Serum in Preparalytic Cases of Poliomyelitis."

Dr. Arthur T. Legg, Boston: "Paralytic Treatment."

Dr. Frank W. Laidlaw, Middletown, N. Y.: "Poliomyelitis in the State of New York."

These six papers were discussed by Drs. W. Lloyd Aycock, Boston; Edward B. Shaw, San Francisco; Lewis J. Pollock, Chicago; J. P. Leake, Washington, D. C.; A. C. Silverman, Syracuse, N. Y.; S. D. Kramer, Boston; Harold L. Amoss, Durham, N. C.; J. E. Gordon, Detroit; William H. Park, New York, and Frank W. Laidlaw, Middletown, N. Y.

FRIDAY, MAY 13—AFTERNOON

The following officers were elected: chairman, Dr. Clyde Brooks, New Orleans; vice chairman, Dr. William Carpenter McCarty, Rochester, Minn.; secretary, Dr. J. J. Moore, Chicago;

delegate, Dr. D. J. Davis, Chicago; alternate, Dr. J. J. Moore, Chicago; Executive Committee, Drs. A. C. Ivy, Chicago; J. Harvey Black, Dallas, Texas, and Clyde Brooks, New Orleans.

Dr. J. Harvey Black, Dallas, Texas, read the chairman's address, entitled "Some Pressing Problems in Allergy."

Drs. I. S. Kahn and B. F. Stout, San Antonio, Texas, presented a paper on "Practical Value of the Cytologic Examination of the Nasal Smear in the Differential Diagnosis Between Allergy and Infection."

Drs. Ray M. Balyeat and Herbert J. Rinkel, Oklahoma City, presented a paper on "Pathology and Symptomatology of Headaches Due to Specific Sensitization."

Dr. Samuel M. Feinberg, Chicago, read a paper on "Sustained Artificial Fever in the Treatment of Intractable Asthma: Physiologic and Therapeutic Consideration."

These three papers were discussed by Drs. Milton B. Cohen, Cleveland; George Piness, Los Angeles; M. Murray Peshkin, New York; Alfred M. Goltman, Memphis, Tenn.; N. F. Thiberge, New Orleans; B. G. Efron, New Orleans; Clyde Brooks, New Orleans; I. S. Kahn, San Antonio, Texas; Ray M. Balyeat, Oklahoma City, and Samuel M. Feinberg, Chicago.

Dr. Harry J. Corper, Denver, read a paper on "Tissue Substrate Micro Culture for Tubercle Bacilli." Discussed by Drs. Joseph E. Pottenger, Monrovia, Calif., and Harry J. Corper, Denver.

Drs. William G. Exton and Anton R. Rose, Newark, N. J., presented a paper on "The Clinical Partition of Blood Protein by Scopometry." Discussed by Drs. Foster M. Johns, New Orleans, and William G. Exton, Newark, N. J.

SECTION ON NERVOUS AND MENTAL DISEASES

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9:15 by the chairman, Dr. Franklin G. Ebaugh, Denver.

Dr. George S. Johnson, Denver, read a paper on "Forensic Psychiatry: Review of the Procedure in Colorado." Discussed by Drs. Edward Delehanty, Denver, and George S. Johnson, Denver.

Dr. Herman Chor, St. Louis, read a paper on "Nerve Degeneration in Poliomyelitis: Changes Observed in Motor Nerve Endings." Discussed by Drs. W. Lloyd Aycock, Boston; William H. Harris, New Orleans; George B. Hassin, Chicago; Walter Freeman, Washington, D. C., and Herman Chor, St. Louis.

Drs. Claus W. Jungeblut and Earl T. Engle, New York, presented a paper on "Resistance to Poliomyelitis: The Relative Importance of Physiologic and Immunologic Factors." Discussed by Drs. W. Lloyd Aycock, Boston; Foster M. Johns, New Orleans, and Claus W. Jungeblut, New York.

Dr. Theodore T. Stone, Chicago, read a paper on "The Rôle of the Anterior Roots in Visceral Sensibility." Discussed by Drs. Lewis J. Pollock, Chicago, and Francis M. Pottenger, Monrovia, Calif.

Dr. David C. Wilson, University, Va., read a paper on "Atypical Facial Neuralgias." Discussed by Drs. Edgar F. Fincher, Jr., Atlanta, Ga.; Carrol C. Turner, Memphis, Tenn., and David C. Wilson, University, Va.

Dr. Harry B. Friedgood, Ann Arbor, Mich., read a paper on "Experimental Exophthalmos and Its Relation to the Pathogenesis of Exophthalmic Goiter." Discussed by Drs. John D. Humber, San Francisco; Charles A. Bahn, New Orleans, and Harry B. Friedgood, Ann Arbor, Mich.

Dr. S. Bernard Wortis, New York, read a paper on "Experimental Epilepsy." Discussed by Drs. Henry Daspit, Jr., New Orleans; Wilmot S. Littlejohn, Birmingham, Ala.; Walter Freeman, Washington, D. C., and S. Bernard Wortis, New York.

THURSDAY, MAY 12—MORNING

Dr. Franklin G. Ebaugh, Denver, read the chairman's address, entitled "The Crisis in Psychiatric Education."

Dr. Sanger Brown II, Albany, N. Y., read a paper on "Comments on Some Current Criticisms of Psychiatry." Discussed by Drs. H. Douglas Singer, Chicago; George W. Hall, Chicago; George Stevenson, New York, and Sanger Brown II, Albany, N. Y.

Drs. Henry R. Viets and Francis T. Hunter, Boston, presented a paper on "Lymphoblastomatous Involvement of the Nervous System." Discussed by Drs. George W. Holmes, Boston; Frank J. Heck, Rochester, Minn.; George B. Hassin, Chicago, and Henry R. Viets, Boston.

Dr. George B. Hassin, Chicago, read a paper on "Amyotrophic Lateral Sclerosis Complicated by Subacute Combined Degeneration of the Cord." Discussed by Drs. Theodore T. Stone, Chicago; Walter F. Schaller, San Francisco; Walter Freeman, Washington, D. C.; Henry R. Viets, Boston, and George B. Hassin, Chicago.

Drs. R. P. Mackay and George W. Hall, Chicago, presented a paper on "Syphilitic Amyotrophy." Discussed by Drs. Henry Daspit, Jr., New Orleans; George B. Hassin, Chicago; Theodore T. Stone, Chicago, and Carroll Turner, Memphis, Tenn.

Drs. Walter F. Schaller, Archie M. Roberts and Edward F. Stadtherr, San Francisco, presented a paper on "Acute Myelitis: Syndrome of Occlusion of the Anterior Spinal Artery at the Fifth Cervical Cord Segment." Discussed by Drs. Edwin G. Zabriskie, New York; Edmund McCollam Connely, New Orleans, and Walter F. Schaller, San Francisco.

Drs. John L. Eckel, Buffalo, and N. W. Winkelman, Philadelphia, presented a paper on "Focal Lesions of the Spinal Cord Due to Vascular Disease." Discussed by Drs. Michael Osnato, New York; Irving J. Sands, Brooklyn, and John L. Eckel, Buffalo.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. George B. Hassin, Chicago; vice chairman, Dr. Titus Harris, Galveston, Texas; secretary, Dr. Henry W. Woltman, Rochester, Minn.; delegate, Dr. Tom B. Throckmorton, Des Moines, Iowa; alternate, Dr. Edward Delehanty, Denver; Executive Committe, Drs. Walter Freeman, Washington, D. C.; Frank G. Ebaugh, Denver, and George B. Hassin, Chicago.

Dr. Edward Delehanty, Denver, alternate, presented his report.

Dr. William C. Menninger, Topeka, Kan., read a paper on "Experiments with Therapeutic Aids in a Psychiatric Hospital." Discussed by Drs. F. Garm Norbury, Jacksonville, Ill.; Thomas Heldt, Detroit, and George S. Johnson, Denver.

Dr. Edgar V. Allen, Rochester, Minn., read a paper on "Raynaud's Disease." Discussed by Drs. W. J. Merle Scott, Rochester, N. Y.; William J. Kerr, San Francisco; Arthur W. Allen, Boston, and Edgar V. Allen, Rochester, Minn.

Dr. Francis C. Grant, Philadelphia, read a paper on "Mortality from Brain Abscess." Discussed by Drs. Ernest Sachs, St. Louis; R. E. Semmes, Memphis, Tenn., and Francis C. Grant, Philadelphia.

Drs. Edward L. Hunt, New York, and James R. Lisa, Brooklyn, presented a paper on "Metastatic Abscesses of the Brain of Intrapulmonary Origin." Discussed by Drs. Gilbert C. Anderson, New Orleans; Henry Daspit, Jr., New Orleans, and James Gardner, Cleveland.

Dr. Irving J. Sands, Brooklyn, read a paper on "The "Anatomic Basis of the Clinical Manifestations of Cerebral Vascular Disorders." Discussed by Drs. George B. Hassin, Chicago, and Irvin J. Sands, Brooklyn.

Dr. Michael Osnato, New York, read a paper on "Diagnostic Criteria for the Diagnosis of Brain Tumor: General Symptoms." Discussed by Drs. Henry Daspit, Jr., New Orleans; Walter J. Otis, New Orleans; H. R. Unsworth, New Orleans; Edward Delehanty, Denver; Franklin G. Ebaugh, Denver; Henry R. Viets, Boston; Ernest Sachs, St. Louis, and Michael Osnato, New York.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9:10 by the chairman, Dr. George M. MacKee, New York.

Dr. MacKee presented the report of the joint committee consisting of members of this section and of the American Dermatological Association concerning the creation of a board of examiners in dermatology and syphilology.

Dr. Howard Fox, New York, moved the adoption of the report. The motion was seconded by Dr. Arthur J. Markley, Denver, and unanimously carried.

As members of this examining board, Drs. Howard Morrow, San Francisco (one year), William H. Mook, St. Louis (two years), George M. MacKee, New York (three years), and C. Guy Lane, Boston (four years) were elected.

Dr. George M. MacKee, New York, read the chairman's address, entitled "Physical Therapy in Dermatology."

Dr. O. E. Denney, Carville, La., read a paper on "Leprosy: Comments on the In Vitro Behavior of Lepra and Certain Other Acid-Fast Micro-Organisms in the Presence of Leukocytes." Discussed by Drs. Charles W. Duval, New Orleans; Harold N. Cole, Cleveland; H. Windsor Wade, Culion, P. I.; Ralph Hopkins, New Orleans, and O. E. Denney, Carville, La.

Dr. H. Windsor Wade, Culion, P. I., read a paper on "Observations on Leprosy with Special Reference to Treatment, Classification and the Tuberculoid Lesion." Discussed by Drs. Ralph Hopkins, New Orleans; Howard Fox, New York; Charles W. Duval, New Orleans; O. E. Denney, Carville, La.; Elmore B. Tauber, Cincinnati; Fred D. Weidman, Philadelphia; Hamilton Montgomery, Rochester, Minn.; C. F. Lehmann, San Antonio, Texas; George M. MacKee, New York, and H. Windsor Wade, Culion, P. I.

Drs. Sidney J. Wilson and Sim H. Hulsey, Fort Worth, Texas, and Fred D. Weidman, Philadelphia, presented a paper on "Chromoblastomycosis in Texas (the Second North American Case)." Discussed by Drs. Clark W. Finnerud, Chicago; C. Guy Lane, Boston; Bedford Shelmire, Dallas, Texas, and Fred D. Weidman, Philadelphia.

Dr. Olin J. Cameron, Ann Arbor, Mich., read a paper on "Primary Actinomycosis of the Tongue." Discussed by Drs. Bedford Shelmire, Dallas, Texas; Fred D. Weidman, Philadelphia; Howard Fox, New York; O. H. Wangensteen, Minneapolis, and Olin J. Cameron, Ann Arbor, Mich.

Dr. Norman N. Epstein, San Francisco, read a paper on "Scleredema Adultorum (Buschke)." Discussed by Drs. Harold N. Cole, Cleveland; Fred D. Weidman, Philadelphia; George M. MacKee, New York, and Norman N. Epstein, San Francisco.

Dr. J. P. Thornley, New York, moved that the section express its appreciation and thanks to Dr. O. E. Denney, Carville, La., and his staff and to Dr. Ralph Hopkins, New Orleans, for their splendid arrangements for the visit to Carville on Tuesday. The motion was seconded and unanimously carried by rising vote.

THURSDAY, MAY 12—MORNING

Dr. J. P. Thornley, New York, read a paper on "Reactions and Serologic Results Following Arsphenamine or Neoarsphenamine Treatment for Syphilis." Discussed by Drs. Ralph Hopkins, New Orleans; Clyde Cummer, Cleveland; Edward White, Dallas, Texas, and J. P. Thornley, New York.

George W. Raiziss, Ph.D., and Dr. Marie Severac, Philadelphia, presented a paper on "Further Studies of Asymptomatic Syphilis and the Effect of Various Drugs on Spirochaeta Pallida in the Brain of Rabbits and Mice." Discussed by Drs. Earl D. Osborne, Buffalo; Harold N. Cole, Cleveland; Jeffrey C. Michael, Houston, Texas; J. P. Thornley, New York; Frank W. Cregor, Indianapolis, and George W. Raiziss, Philadelphia.

Drs. Harold N. Cole, Torald H. Sollmann and Nora Schreiber, Cleveland, presented a paper on "Excretion of Mercury After Calomel Inunctions, with Some Observations on the Method of Absorption of Mercury when Used by the Inunction Route." Discussed by Drs. William H. Guy, Pittsburgh; J. P. Thornley, New York; Robert C. Jamieson, Detroit, and Harold N. Cole, Cleveland.

Drs. William H. Goeckerman and Paul A. O'Leary, Rochester, Minn., presented a paper on "Erythroderma Psoriaticum." Discussed by Drs. C. F. Lehmann, San Antonio, Texas; Harold N. Cole, Cleveland; Fred D. Weidman, Philadelphia; J. R. Allison, Columbia, S. C.; Clark W. Finnerud, Chicago; William Allen Pusey, Chicago; G. E. Johnson, Ardmore, Okla.; Ralph Hopkins, New Orleans, and William H. Goeckerman, Rochester, Minn.

Drs. Earl D. Osborne and E. D. Putnam, Buffalo, presented a paper on "Industrial Dermatoses with Special Reference to Mycotic Dermatitis in Industry."

Dr. M. E. Obermayer, Chicago, read a paper on "Eczema Due to Contact with Commercial Rubber Preparations."

These two papers were discussed by Drs. C. Guy Lane, Boston; Harry E. Alderson, San Francisco; Harry R. Foerster, Milwaukee; Jeffrey C. Michael, Houston, Texas; Lester Hollander, Pittsburgh; Bedford Shelmire, Dallas, Texas; N. P. Anderson, Los Angeles; William Allen Pusey, Chicago; Clark W. Finnerud, Chicago; Fred D. Weidman, Philadelphia; Harold N. Cole, Cleveland; Everett S. Lain, Oklahoma City; Earl D. Osborne, Buffalo, and M. E. Obermayer, Chicago.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. Francis Eugene Senear, Chicago; vice chairman, Dr. Howard T. Phillips, Wheeling, W. V.; secretary, Dr. Harry R. Foerster, Milwaukee; delegate, Dr. Frank W. Cregor, Indianapolis; alternate delegate, Dr. Bedford Shelmire, Dallas, Texas.

Drs. J. V. Van Cleve and Henry F. DeWolf, Cleveland, presented a paper on "Lymphogranuloma Inguinale (Lymphogranulomatosis Inguinalis of Nicholas and Favre)." Discussed by Drs. Fred D. Weidman, Philadelphia; Elmo D. French, Miami, Fla.; Lester Hollander, Pittsburgh; Harold N. Cole, Cleveland; Howard Fox, New York, and J. V. Van Cleve, Cleveland.

Dr. Henry D. Niles, New York, read a paper on "The Relation of Roentgen Therapy to Scarring in Acne Vulgaris." Discussed by Drs. Jeffrey C. Michael, Houston, Texas; Howard Fox, New York; C. F. Lehmann, San Antonio, Texas; Fred D. Weidman, Philadelphia; Clark W. Finnerud; Chicago; J. R. Allison, Columbia, S. C.; W. J. MacDonald, Boston; George M. MacKee, New York; Elmo D. French, Miami, Fla.; Earl D. Osborne, Buffalo; E. R. Seale, Houston, Texas; William A. Rosenberg, Chicago, and Henry D. Niles, New York.

Drs. Jack W. Jones, Herbert S. Alden and Everett L. Bishop, Atlanta, Ga., presented a paper on "Pseudoxanthoma Elasticum: Report of Five Cases Showing Its Association with Angioid Streaks of the Retina." Discussed by Drs. Grady E. Clay, Atlanta, Ga.; Jeffrey C. Michael, Houston, Texas; Fred D. Weidman, Philadelphia; Hamilton Montgomery, Rochester, Minn.; Laurence R. Taussig, San Francisco, and Jack W. Jones, Atlanta.

Drs. Clinton W. Lane and C. Malone Stroud, St. Louis, presented a paper on "Pyoderma Gangrenosum with Report of an Unusual Case." Discussed by Drs. William H. Goeckerman, Rochester, Minn.; William H. Guy, Pittsburgh; Jack W. Jones, Atlanta, Ga.; M. F. Engman, Jr., St. Louis, and C. Malone Stroud, St. Louis.

Dr. Ernest K. Stratton, San Francisco, read a paper on "Cutis Verticis Gyrata (of Inflammatory Origin)." Discussed by Drs. Harry R. Foerster, Milwaukee; Harry E. Alderson, San Francisco, and Ernest K. Stratton, San Francisco.

Dr. Harold N. Cole, Cleveland, moved a rising vote of thanks to Dr. Ralph Hopkins, Dr. M. T. Van Studdiford, Dr. Henry E. Menage, Dr. J. N. Roussel, Dr. R. A. Oriol, Dr. John A. Devron, and Dr. T. A. Maxwell for their hospitality and courtesy during the meeting. The motion was seconded and unanimously carried.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

WEDNESDAY, MAY 11—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. J. E. Gordon, Detroit.

On motion of Dr. Henry F. Vaughan, Detroit, it was voted to nominate the following for Associate Fellowship: Raymond V. Brokaw, M.D., 25 West Forty-Third Street, New York; Max Joseph Exner, M.D., 110 Morningside Drive, New York; George S. Luckett, M.D., Stanford University, Calif., and John F. Norton, Ph.D., Department of Health, Detroit.

Drs. R. E. Dyer, L. F. Badger and E. T. Ceder, Washington, D. C., presented a paper on "Endemic Typhus of the United

States: History, Recent Developments, and Present Status of Our Knowledge." Discussed by Drs. Bedford Shelmire, Dallas, Texas, and H. A. Kemp, Dallas, Texas.

Drs. E. L. Bishop, Nashville, Tenn., and H. C. Stewart, Franklin, Tenn., presented a paper on "Tuberculosis in Tennessee." Discussed by Drs. Horton B. Casparis, Nashville, Tenn.; J. N. Baker, Montgomery, Ala.; Henry F. Vaughan, Detroit, and H. C. Stewart, Franklin, Tenn.

Drs. T. P. Hughes and W. A. Sawyer, New York, presented a paper on "Significance of Immunity Tests in Epidemiology, as Illustrated in Yellow Fever." Discussed by Drs. Bolivar J. Lloyd, Washington, D. C.; Claus W. Jungeblut, New York; Charles A. Mohr, Mobile, Ala., and W. A. Sawyer, New York.

Drs. Mark F. Boyd, Tallahassee, Fla., and Warren K. Stratman-Thomas, Jacksonville, Fla., presented a paper on "Acquired Immunity in Benign Tertian Malaria." Discussed by Drs. C. C. Bass, New Orleans, and Mark F. Boyd, Tallahassee, Fla.

Dr. Ralph McBurney, Tuscaloosa, Ala., read a paper on "A Study of Conditions Bearing on Intermittence in Typhoid Carriers." Discussed by Drs. Leon C. Havens, Montgomery, Ala., and Ralph McBurney, Tuscaloosa, Ala.

THURSDAY, MAY 12—AFTERNOON

A joint meeting was held with the Section on Practice of Medicine. For a report of the proceedings, see the minutes of that section.

FRIDAY, MAY 13—AFTERNOON

The following officers were elected: chairman, Dr. J. N. Baker, Montgomery, Ala; vice chairman, Dr. William Harvey Perkins, New Orleans; secretary, Dr. W. G. Smillie, Boston; delegate, Dr. Stanley H. Osborn, Hartford, Conn.

Dr. Allan J. Hruby, Chicago, read a paper on "Collapse Therapy: Its Public Health Aspects and Potentialities." Discussed by Drs. Stanley H. Osborn, Hartford, Conn.; J. N. Baker, Montgomery, Ala., and Allan J. Hruby, Chicago.

Dr. Donald B. Armstrong, New York, read a paper on "A Study of Sickness Cost and Private Medical Practice." Discussed by Drs. George E. Follansbee, Cleveland; Stanley H. Osborn, Hartford, Conn., and Donald B. Armstrong, New York.

Drs. G. A. Wheeler and W. H. Sebrell, Washington, D. C., presented a paper on "The Control of Pellagra." No discussion.

Dr. Willard C. Stoner, Cleveland, read a paper on "The Hospital Health Service for the Student Nurse." Discussed by Dr. Basil C. MacLean, New Orleans.

Dr. Dwight O'Hara, Boston, read a paper on "The Clinical Teaching of Preventive Medicine." Discussed by Drs. William Harvey Perkins, New Orleans, and J. E. Gordon, Detroit.

SECTION ON UROLOGY

WEDNESDAY, MAY 11—AFTERNOON

The meeting was called to order at 2:05 by the chairman, Dr. J. Dellinger Barney, Boston.

Dr. H. L. Morris, Detroit, read a paper on "Renal Backache." Discussed by Drs. R. L. Gordon, New Orleans; A. I. Folsom, Dallas, Texas; Gideon Timberlake, St. Petersburg, Fla.; J. Dellinger Barney, Boston; W. J. Wallace, Oklahoma City; M. H. Foster, Alexandria, La.; Paul R. Stalnaker, Houston, Texas; Robert Gutierrez, New York, and H. L. Morris, Detroit.

Dr. William P. Herbst, Jr., Minneapolis, read a paper on "A Pyeloscopic and Urographic Study Before and After Renal Sympathectomy."

Dr. R. E. Cumming, Detroit, read a paper on "Structural and Functional Changes in Urinary Tract Following Transverse Myelitis."

These two papers were discussed by Drs. H. W. E. Walther, New Orleans; Henry K. Sangree, Philadelphia; M. L. Boyd, Atlanta, Ga.; William P. Herbst, Jr., Minneapolis, and R. E. Cumming, Detroit.

Dr. Henry K. Sangree, Philadelphia, read a paper on "Urinary Calculi."

Dr. Hugh H. Young, Baltimore, read a paper on "Surgery in Obstructive and Calculous Disease of the Kidney."

Dr. George H. Ewell, Madison, Wis., read a paper on "Cystine Nephrolithiasis."

These three papers were discussed by Drs. Joseph Hume, New Orleans; Paul R. Stalnaker, Houston, Texas; A. H. Lippincott, Camden, N. J.; J. U. Reaves, Mobile, Ala.; H. K. Sangree, Philadelphia, and George H. Ewell, Madison, Wis.

THURSDAY, MAY 12—AFTERNOON

Dr. J. Dellinger Barney, Boston, read the chairman's address, entitled "Infarcts of the Kidney."

Dr. Henry G. Bugbee, New York, read a paper on "Operative Relief of Prostatic Obstruction."

Dr. John R. Caulk, St. Louis, read a paper on "Author's Cautery Punch Operation Continues to Reduce the Necessity for Prostatectomy."

Dr. Hermon C. Bumpus, Jr., Rochester, Minn., read a paper on "Results of Prostatic Resection over Seven Year Period."

Dr. Joseph F. McCarthy, New York, read a paper on "The Prophylaxis of Prostatism."

Dr. T. M. Davis, Greenville, S. C., read a paper on "The Present Status of Prostatic Resection."

These five papers were discused by Drs. N. F. Ockerblad, Kansas City, Mo.; A. I. Folsom, Dallas, Texas; William F. Braasch, Rochester, Minn.; Hugh H. Young, Baltimore; N. G. Alcock, Iowa City; Gideon Timberlake, St. Petersburg, Fla.; O. F. Elder, Atlanta, Ga.; R. A. Hennessey, Memphis, Tenn.; B. W. Turner, Houston, Texas; George R. Livermore, Memphis, Tenn.; John R. Caulk, St. Louis; Joseph F. McCarthy, New York, and T. M. Davis, Greenville, S. C.

FRIDAY, MAY 13—AFTERNOON

The following officers were elected: chairman, N. G. Alcock, Iowa City; vice chairman, J. U. Reaves, Mobile, Ala.; secretary, J. H. Morrissey, New York; delegate, Dr. Arthur L. Chute, Boston; alternate, Dr. H. W. E. Walther, New Orleans.

Dr. C. E. Ervin, Danville, Pa., read a paper on "Treatment of Patients with Urinary Tract Infection."

Dr. Edwin Davis, Omaha, read a paper on "Urinary Antisepsis—A Comparison of Methenamine, Caprokol, Pyridium and Acriflavine as to Clinical Efficiency."

These two papers were discussed by Drs. A. I. Folsom, Dallas, Texas; H. W. E. Walther, New Orleans; Anson L. Clark, Rochester, Minn.; I. G. Duncan, Memphis, Tenn.; R. L. Gordon, New Orleans; M. L. Boyd, Atlanta, Ga.; J. Dellinger Barney, Boston; C. E. Ervin, Danville, Pa., and Edwin Davis, Omaha.

Dr. M. L. Boyd, Atlanta, Ga., read a paper on "Carcinoma of Bladder: Indications for Nephrostomy and Nephrectomy." Discussed by Drs. Henry K. Sangree, Philadelphia; Hermon C. Bumpus, Jr., Rochester, Minn.; George R. Livermore, Memphis, Tenn., and M. L. Boyd, Atlanta, Ga.

Dr. Robert Gutierrez, New York, read a paper on "Surgical Aspect of Renal Agenesis with Special Reference to Hypoplastic Kidney, Renal Aplasia and Congenital Absence of One Kidney." Discussed by Drs. C. L. Peacock, New Orleans; Thomas D. Moore, Memphis, Tenn.; I. G. Duncan, Memphis, Tenn.; H. W. E. Walther, New Orleans, and Robert Gutierrez, New York.

Dr. George R. Livermore, Memphis, Tenn., moved that a rising vote of thanks be extended to the urologists of New Orleans for their courtesy and splendid hospitality during the meeting. The motion was seconded and unanimously carried.

SECTION ON ORTHOPEDIC SURGERY

WEDNESDAY, MAY 11—AFTERNOON

The meeting was called to order at 2:05 by the chairman, Dr. James Warren Sever, Boston.

Dr. Reginald Burbank, New York, read a paper on "Studies on the Etiology and Treatment of Chronic Arthritis." Discussed by Drs. Robert B. Osgood, Boston; Henry W. Meyerding, Rochester, Minn., and Reginald Burbank, New York.

Dr. Wallace S. Duncan, Cleveland, read a paper on "The Relationship of Thyroid Disease to Chronic Nonspecific Arthritis." Discussed by Drs. Henry W. Meyerding, Rochester, Minn.; Ralph Pemberton, Philadelphia; Reginald Burbank, New York, and Wallace S. Duncan, Cleveland.

Dr. James A. Dickson, Cleveland, read a paper on "An Analysis of Two Hundred Cases of Periarthritis of the Shoulder." Discussed by Drs. Myron O. Henry, Minneapolis; W. B. Carrell, Dallas, Texas; Joseph E. Wheeler, Jefferson Barracks, Mo.; Willis C. Campbell, Memphis, Tenn., and James A. Dickson, Cleveland.

Dr. Paul C. Williams, Ann Arbor, Mich., read a paper on "Reduced Lumbosacral Joint Space and Its Relationship to Sciatic Irritation." Discussed by Drs. Fremont A. Chandler, Chicago; Archer O'Reilly, St. Louis; Albert H. Brewster, Boston; James Warren Sever, Boston; Henry W. Meyerding, Rochester, Minn., and Paul C. Williams, Ann Arbor, Mich.

Dr. Philip Lewin, Chicago, read a paper on "The Galeazzi Treatment of Scoliosis." Discussed by Drs. J. H. Kite, Decatur, Ga.; Jacob Kulowski, Iowa City; A. R. Shands, Jr., Dunham, N. C., and Philip Lewin, Chicago.

Dr. Charles LeRoy Lowman, Los Angeles, read a paper on "Postsurgical Use of the Underwater Gymnasium." No discussion.

THURSDAY, MAY 12—AFTERNOON

Dr. J. H. Kite, Decatur, Ga., read a paper on "The Treatment of Congenital Clubfoot." Discussed by Drs. E. S. Hatch, New Orleans, and J. H. Kite, Decatur, Ga.

Dr. Armitage Whitman, New York, read a paper on "An Operative Procedure for the Relief of Congenital Elevation of the Scapula and for Paralysis of the Serratus Magnus Muscle." Discussed by Drs. John Prentiss Lord, Omaha; James A. Dickson, Cleveland; Philip Lewin, Chicago; Francis Carr, Jr., New York, and Armitage Whitman, New York.

Dr. James Warren Sever, Boston, read the chairman's address, entitled "The Crippled Child Versus the Chronic Sick of Massachusetts."

Dr. Chester C. Schneider, Milwaukee, read a paper on "Acromioclavicular Dislocation: Autoplastic Reconstruction." Discussed by Drs. Isidore Cohn, New Orleans; Myron O. Henry, Minneapolis; W. B. Carrell, Dallas, Texas; Philip Lewin, Chicago, and Chester C. Schneider, Milwaukee.

Dr. Rudolph S. Reich, Cleveland, read a paper on "End-Results in Fractures of the Os Calcis." Discussed by Drs. Robert Carothers, Cincinnati; Frank G. Murphy, Chicago; Roland Hammond, Providence, R. I.; J. B. Foster, Houston, Texas, and Rudolph S. Reich, Cleveland.

FRIDAY, MAY 13—AFTERNOON

The following officers were elected: chairman, Dr. W. Barnett Owen, Louisville, Ky.; vice chairman, Dr. J. S. Speed, Memphis, Tenn.; secretary, Dr. Fremont A. Chandler, Chicago.

Dr. Albert H. Brewster, Boston, read a paper on "Countersinking the Astragalus in Paralytic Feet." Discussed by Drs. P. A. McIlhenny, New Orleans; W. B. Carrell, Dallas, Texas; J. S. Speed, Memphis, Tenn.; S. L. Hass, San Francisco, and Albert H. Brewster, Boston.

Dr. C. B. Francisco, Kansas City, Mo., read a paper on "Tumors of the Pelvis." Discussed by Drs. Henry W. Meyerding, Rochester, Minn.; J. S. Speed, Memphis, Tenn.; Rudolph S. Reich, Cleveland, and C. B. Francisco, Kansas City, Mo.

Dr. Henry W. Meyerding, Rochester, Minn., moved that the section heartily approve of the plan as submitted by the National Board of Medical Examiners (covering the proposed national examining board) and that it give its hearty cooperation to the committee appointed by the American Orthopedic Society for the furtherance of this movement. The motion was seconded and carried, and the chairman appointed Dr. Philip Lewin, Chicago, Dr. Archer O'Reilly, St. Louis, and Dr. Henry W. Meyerding, Rochester, Minn., as members of a special committee to consider the proposed plan.

Dr. W. Eugene Wolcott, Des Moines, Iowa, read a paper on "Circulation of the Head and Neck of the Femur in Its Relation to Nonunion." Discussed by Drs. Myron O. Henry, Minneapolis; F. J. Gaenslen, Milwaukee; Chester C. Schneider, Milwaukee; P. H. McIlhenny, New Orleans; Robert Carothers, Cincinnati, and W. Eugene Wolcott, Des Moines, Iowa.

Drs. Eugene M. Regen and H. T. Hillstrom, Nashville, Tenn., presented a paper on "An Experimental Study of the Effect of the Roentgen Ray on Bone Growth and on Bone Regeneration." Discussed by Drs. S. L. Haas, San Francisco, and H. T. Hillstrom, Nashville, Tenn.

Dr. John Prentiss Lord, Omaha, read a paper on "Closure of Osteomyelitic Cavities by Plastic Methods." Discussed by Drs. F. J. Gaenslen, Milwaukee, and John Prentiss Lord, Omaha.

Dr. Frank G. Murphy, Chicago, read a paper on "Injuries to the Internal and External Lateral Ligaments of the Knee." Discussed by Drs. C. B. Francisco, Kansas City, Mo.; L. D. Smith, Milwaukee; Paul A. Quaintance, Los Angeles, and Frank G. Murphy, Chicago.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9:15 by the vice chairman, Dr. Curtice Rosser, Dallas, Texas.

Dr. E. G. Martin, Detroit, read a paper on "Prolapse of the Rectum: Its Reclassification and Surgical Treatment." Discussed by Drs. Jerome M. Lynch, New York; Maurice Lescale, New Orleans; Louis J. Hirschman, Detroit; C. C. Meckling, Pittsburgh; Louis A. Buie, Rochester, Minn., and E. G. Martin, Detroit.

Drs. Curtice Rosser and Stuart A. Wallace, Dallas, Texas, presented a paper on "The Pathology of Tumor Formation Consequent to the Injection of Oils under the Rectal Mucosa." Discussed by Drs. Fred D. Weidman, Philadelphia; C. J. de Bere, Chicago; C. C. Tucker, Wichita, Kan.; Louis A. Buie, Rochester, Minn.; Jerome M. Lynch, New York; E. G. Martin, Detroit; Louis J. Hirschman, Detroit; Walter A. Fansler, Minneapolis, and Curtice Rosser, Dallas, Texas.

Dr. George E. Binkley, New York, read a paper on "Colostomy, Radiation Therapy and Perineal Resection for Carcinoma of the Rectum." Discussed by Drs. Curtice Rosser, Dallas, Texas; Dudley A. Smith, San Francisco, and George E. Binkley, New York.

Dr. Dudley A. Smith, San Francisco, read a paper on "The Status of Colostomy." Discussed by Drs. Fred W. Rankin, Rochester, Minn.; Louis J. Hirschman, Detroit; Alton Ochsner, New Orleans; C. C. Meckling, Pittsburgh, and Dudley A. Smith, San Francisco.

Dr. Sara M. Jordan, Boston, read a paper on "The Unstable Colon and Neurasthenia." Discussed by Drs. John G. Mateer, Detroit; Julius Friedenwald, Baltimore; Henry A. Rafsky, New York; Sidney K. Simon, New Orleans; Seale Harris, Birmingham, Ala.; Sidney A. Portis, Chicago, and Sara M. Jordan, Boston.

THURSDAY, MAY 12—MORNING

Dr. George B. Eusterman, Rochester, Minn., read the chairman's address, entitled "Notes on Problems and Progress in Gastro-Enterology."

The following papers were read as a symposium on "Experimental Work in Peptic Ulcer":

Drs. F. C. Mann and J. L. Bollman, Rochester, Minn.: "Observations on the Development and Treatment of Experimentally Produced Peptic Ulcers." Discussed by Dr. I. S. Ravdin, Philadelphia.

Drs. A. C. Ivy and S. J. Fogelson, Chicago: "Experimental and Clinical Observations on Gastric Mucin in 'Peptic Ulcer.'" Discussed by Drs. George B. Eusterman, Rochester, Minn., and Martin G. Vorhaus, New York.

Dr. Lewis Gergory Cole, New York: "Process of Repair of Gastric Ulcer." Discussed by Drs. Charles W. Duval, New Orleans, and Owen H. Wangensteen, Minneapolis.

Dr. Frank Smithies, Chicago: "A Clinical Consideration of the Therapeutic Worth of Mucin in the Treatment of Peptic Ulcer."

Dr. Henry A. Rafsky, New York: "The Relation of Alkalosis to Peptic Ulcer." Discussed by Drs. L. J. Hardt, Chicago, and James B. Eyerly, Chicago.

The symposium as a whole was discussed by Drs. Sidney A. Portis, Chicago; Robert Kapsinow, Lafayette, La.; J. L. Bollman, Rochester, Minn.; A. C. Ivy, Chicago; A. F. R. Andresen, Brooklyn; S. J. Fogelson, Chicago; Frank Smithies, Chicago; Lewis Gregory Cole, New York; Julius Friedenwald, Baltimore, and Harry A. Rafsky, New York.

Drs. George W. Holmes and Aubrey O. Hampton, Boston, presented a paper on "The Instances of Carcinoma in Chronic

Ulcerating Lesions of the Stomach." Discussed by Drs. John D. Camp, Rochester, Minn.; Frank Smithies, Chicago; Martin E. Rehfuss, Philadelphia; Lewis Gregory Cole, New York, and George W. Holmes, Boston.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. Curtice Rosser, Dallas, Texas; vice chairman, Dr. A. F. R. Andresen, Brooklyn; secretary, Dr. H. L. Bockus, Philadelphia; delegate, Dr. Descum C. McKenney, Buffalo; alternate, Dr. Sara M. Jordan, Boston.

Dr. Burrill B. Crohn, New York, presented a resolution on the death of Dr. Percy B. Davidson, which on motion of Dr. Martin E. Rehfuss, Philadelphia, duly seconded, was unanimously adopted.

Dr. Martin E. Rehfuss, Philadelphia, read a paper on "Demonstration of a Hormone-Like Element Capable of Affecting the Small Intestinal Contractions." Discussed by Drs. A. C. Ivy, Chicago; Daniel N. Silverman, New Orleans; Seizaburo Okada, Nagoya, Japan, and Martin E. Rehfuss, Philadelphia.

Dr. Burrill B. Crohn, New York, read a paper on "Terminal Ileitis: Its Clinical Manifestations." Discussed by Drs. J. A. Bargen, Rochester, Minn.; Julius Friedenwald, Baltimore; Louis J. Hirschman, Detroit; Sidney A. Portis, Chicago, and Burrill B. Crohn, New York.

Drs. Wallace M. Yater and Laurence S. Otell, Washington, D. C., presented a paper on "The Differential Diagnosis of Diseases of the Liver and Spleen with the Aid of Roentgenography After the Intravenous Injection of Thorium Dioxide." Discussed by Drs. William H. Harris, New Orleans; C. J. Tripoli, New Orleans; Oscar Hite, Richmond, Va., and Wallace M. Yater, Washington, D. C.

Drs. William E. Robertson, William A. Swalm and Frank W. Konzelmann, Philadelphia, presented a paper on "Comparative Merits of the Five Most Popular Tests for Determining the Functional Capacity of the Liver." Discussed by Drs. John A. Killian, New York; Donovan C. Browne, New Orleans; Sidney A. Portis, Chicago; J. E. Hirsh, Birmingham, Ala.; L. A. Crandall, Chicago; George B. Eusterman, Rochester, Minn., and William E. Robertson, Philadelphia.

Drs. Julius Friedenwald and Samuel Morrison, Baltimore, presented a paper on "Clinical Observation on the Relation of Gastric and Renal Disorders." Discussed by Drs. Sidney K. Simon, New Orleans; Seale Harris, Birmingham, Ala.; A. L. Levin, New Orleans, and Julius Friedenwald, Baltimore.

The following Committee on Scientific Exhibit was appointed: Dr. A. H. Aaron, Buffalo, chairman; Dr. W. A. Fansler, Minneapolis, and Dr. A. F. R. Andresen, Brooklyn.

SECTION ON RADIOLOGY

WEDNESDAY, MAY 11—MORNING

The meeting was called to order at 9:05 by the chairman, Dr. Henry K. Pancoast, Philadelphia.

Dr. John W. Pierson, Baltimore, and Dr. Charles L. Martin, Dallas, Texas, were appointed to serve on the Executive Committee as substitutes for Dr. Fred M. Hodges, Richmond, Va., and Dr. Arthur W. Erskine, Cedar Rapids, Iowa.

Dr. Henry K. Pancoast, Philadelphia, read the chairman's address, entitled "The Superior Pulmonary Sulcus Tumor."

Dr. Maurice Lenz, New York, read a paper on "Roentgenotherapy of Malignant Neoplasms of the Upper Respiratory Tract." Discussed by Drs. Francis Carter Wood, New York, and Maurice Lenz, New York.

Dr. A. U. Desjardins, Rochester, Minn., read a paper on "Radiotherapy for Hodgkin's Disease and Lymphosarcoma." Discussed by Drs. John H. Musser, New Orleans; Dr. Walter L. Mattick, Buffalo, and A. U. Desjardins, Rochester, Minn.

Dr. Charles L. Martin, Dallas, Texas, read a paper on "Small Radium Needle Technic." Discussed by Drs. Maurice Lenz, New York; W. E. Costolow, Los Angeles; A. James Larkin, Chicago, and Charles L. Martin, Dallas.

Dr. Edwin C. Ernst, St. Louis, read a paper on "Radiologic Research: Its Significance in Medicine." Discussed by Dr. Albert Soiland, Los Angeles.

Dr. Walter L. Mattick, Buffalo, read a paper on "Protracted Treatment with Heavily Filtered High Voltage Roentgen Irradiation in Its Application to Cancer Therapy." Discussed by Drs. A. U. Desjardins, Rochester, Minn.; John T. Murphy, Toledo, Ohio, and Walter L. Mattick, Buffalo.

THURSDAY, MAY 12—MORNING

Dr. Arthur C. Christie, Washington, D. C., was appointed to serve on the Executive Committee in place of Dr. Charles L. Martin, Dallas, Texas, who was called home.

Dr. C. H. Heacock, Memphis, Tenn., read a paper on "Calcification in Intestinal Tuberculosis." Discussed by Drs. P. F. Butler, Boston, and C. H. Heacock, Memphis, Tenn.

Drs. P. F. Butler and Max Ritvo, Boston, presented a paper on "Physostigmine, a Peristaltic Stimulant." Discussed by Drs. Ernest C. Samuel, New Orleans; L. R. Sante, St. Louis, and P. F. Butler, Boston.

Dr. John W. Pierson, Baltimore, read a paper on "Pneumonia Due to the Aspiration of Lipoids." Discussed by Drs. W. Walter Wasson, Denver; John F. Herrick, Ottumwa, Iowa; J. L. Dubrow, Memphis, Tenn., and John W. Pierson, Baltimore.

Dr. Barnet P. Stivelman, New York, read a paper on "Atelectasis in Pulmonary Tuberculosis." Discussed by Drs. L. R. Sante, St. Louis; Henry K. Pancoast, Philadelphia; Lawrence Reynolds, Detroit; J. L. Dubrow, Memphis, Tenn.; John W. Pierson, Baltimore, and Barnet P. Stivelman, New York.

Dr. Arthur C. Christie, Washington, D. C., read a paper on "The Education and Certification of Radiologists." Discussed by Drs. Henry K. Pancoast, Philadelphia; P. F. Butler, Boston; George W. Grier, Pittsburgh, and Leon J. Menville, New Orleans.

Drs. Ira H. Lockwood and Wendell Stewart, Kansas City, Mo., presented a paper on "A Roentgen Study of the Physiologic and Pathologic Changes in the Mammary Gland." Discussed by Drs. Leon J. Menville, New Orleans; Eugene P. Pendergrass, Philadelphia, and Ira H. Lockwood, Kansas City, Mo.

FRIDAY, MAY 13—MORNING

The following officers were elected: chairman, Dr. George W. Grier, Pittsburgh; vice chairman, Dr. W. Walter Wasson, Denver; secretary, Dr. John T. Murphy, Toledo, Ohio; delegate, Dr. Albert Soiland, Los Angeles; alternate, Dr. A. U. Desjardins, Rochester, Minn.

Dr. Arthur C. Christie, Washington, D. C., moved the adoption of the following resolution:

WHEREAS, It is considered desirable to establish some method for control of the practice of radiology; and

WHEREAS, Certain medical specialties have established boards for certification of specialists in their respective fields; and

WHEREAS, The boards above mentioned have operated successfully over varying periods of years to the great advantage of the specialties which they represent; be it therefore

Resolved, That the Section on Radiology of the American Medical Association request the Board of Trustees to appoint a committee of two to confer with the American Roentgen Ray Society, the Radiological Society of North America, the American College of Radiology, and the American Radium Society, with the object of forming an American Board for Radiologic Examinations; and be it further

Resolved, That any plan presented by the above named committee shall take effect and be put into operation only after approval by the Board of Trustees and by at least two of the above mentional national radiologic organizations.

The motion was regularly seconded, was put to a vote and carried.

Dr. John D. Camp, Rochester, Minn., read a paper on "A Roentgenologic Study of the Osseous Changes in Hyperparathyroidism." Discussed by Drs. Lawrence Reynolds, Detroit; Plinn F. Morse, Detroit; C. S. Gorsline, Battle Creek; Nathaniel Gates, Detroit; Henry K. Pancoast, Philadelphia; Philip Lewin, Chicago, and John D. Camp, Rochester, Minn.

Dr. A. Jerome Thomas, Shreveport, La., read a paper on "Radiographic Researches of Pregnancy Featuring the Early Diagnosis." Discussed by Drs. Amédée Granger, New Orleans; J. T. Murphy, Toledo, Ohio; Henry K. Pancoast, Philadelphia, and A. Jerome Thomas, Shreveport, La.

Dr. Bundy Allen, Tampa, Fla., read a paper on "Roentgenographic and Clinical Observations of the Nasal Accessory Sinuses."

Dr. W. Walter Wasson, Denver, read a paper on "The Changes Taking Place in the Nasal Accessory Sinuses After Birth."

These two papers were discussed by Drs. Amédée Granger, New Orleans; Edwin C. Ernst, St. Louis; Eugene P. Pendergrass, Philadelphia; Bundy Allen, Tampa, Fla., and W. Walter Wasson, Denver.

Dr. Roy G. Giles, Temple, Texas, read a paper on "Fractures of the Spine: Report of One Hundred and Seventy-Three Cases." No discussion.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit at the New Orleans session was of especial interest because of the diversified character of the exhibits. Twelve sections of the Scientific Assembly sponsored group exhibits, with forty-two individuals reading papers before the sections who also had exhibits on the same subjects in the Scientific Exhibit.

Three special exhibits authorized by the Board of Trustees were shown for the first time this year. The exhibit on poliomyelitis was a cooperative undertaking by the Committee on Scientific Exhibit, the United States Public Health Service, and six sections of the Scientific Assembly. The exhibit occupied seven booths, at which demonstrations were given at stated intervals, and was accompanied by a pamphlet written for the occasion for distribution to visitors. The committee in charge of the exhibit was composed of John E. Gordon, Detroit; Arthur T. Legg, Boston, and Ralph C. Williams, chairman, Washington, D. C. The active committee was assisted by an advisory committee composed of William H. Park, New York, representing the Section on Pathology and Physiology; J. C. McKinley, Minneapolis, representing the Section on Nervous and Mental Diseases; Kenneth D. Blackfan, Boston, representing the Section on Pediatrics; Walter Truslow, Brooklyn, representing the Section on Orthopedic Surgery; Franklin E. Murphy, Kansas City, Mo., representing the Section on Practice of Medicine, and S. D. Kramer, Boston, representing the Section on Preventive and Industrial Medicine and Public Health. Demonstrations on different phases of poliomyelitis were given by W. Lloyd Aycock, Boston; S. D. Kramer, Boston; John E. Gordon, Detroit; E. B. Shaw, San Francisco; James L. Wilson, Boston; J. P. Leake, Washington; Arthur T. Legg, Boston, and Janet B. Merrill, Boston.

The exhibit on cancer was in charge of a committee composed of Max Cutler, Chicago, R. S. Ferguson, New York, and Frank W. Hartman, chairman, Detroit, assisted by the following demonstrators: A. C. Broders, Rochester, Minn.; H. P. Doub, Detroit; Charles F. Geschickter, Baltimore; John G. Mateer, Detroit; J. P. Pratt, Detroit, and Shields Warren, Boston. A continuous program of illustrated lectures and motion pictures was carried on in connection with the exhibit as a joint endeavor with the American Society for the Control of Cancer.

The exhibit on physical therapy occupied four booths with continuous demonstrations. The committee was as follows: K. G. Hansson, New York; C. L. Lowman, Los Angeles, and John S. Coulter, chairman, Chicago.

The Section on Diseases of Children included in its group fourteen exhibits on a variety of subjects, two of which received a certificate of merit. The committee in charge was composed of A. Graeme Mitchell, Cincinnati; Robert A. Strong, New Orleans, and F. Thomas Mitchell, chairman, Memphis, Tenn.

The Section on Practice of Medicine showed twelve exhibits, to which were awarded one gold medal and one silver medal. James H. Austin, Philadelphia, Eugene S. Kilgore, San Francisco, and L. G. Rowntree, chairman, Rochester, Minn., formed the committee in charge.

The Section on Dermatology and Syphilology, under the direction of a committee composed of John A. Devron, New Orleans, Clark W. Finnerud, Chicago, Robert L. Gilman, Philadelphia, and Fred D. Weidman, chairman, Philadelphia, continued its work on the relation of dermatology to systemic conditions. In addition to the group exhibit there were several other exhibits, one of which was awarded a silver medal and one a certificate of merit.

The Section on Preventive and Industrial Medicine and Public Health sponsored eight exhibits, to one of which was given a certificate of merit. The committee in charge was as follows: Alice Hamilton, Boston; E. R. Hayhurst, Columbus, Ohio, and Paul A. Davis, chairman, Akron, Ohio.

The Section on Nervous and Mental Diseases sponsored a motion picture program shown in a space adjoining its exhibits. The committee in charge was composed of Earl D. Bond, Philadelphia; Groves B. Smith, Godfrey, Ill., and Thomas J. Heldt, chairman, Detroit.

The Section on Obstetrics, Gynecology and Abdominal Surgery, with a committee composed of Norman F. Miller, Ann Arbor, Mich.; T. B. Sellers, New Orleans, and E. D. Plass, chairman, Iowa City, placed special emphasis on its motion picture program shown in conjunction with the exhibits.

The Section on Ophthalmology, in addition to the exhibits, showed motion pictures in an adjoining space. The committee in charge was composed of C. A. Bahn, New Orleans; G. L. Hardin, New Orleans, and Parker Heath, chairman, Detroit.

The Section on Laryngology, Otology and Rhinology, under the auspices of a committee composed of F. E. Lejeune, New Orleans; William A. Wagner, New Orleans, and Austin A. Hayden, chairman, Chicago, besides its exhibit, carried on a motion picture program at which seventeen films were shown on a continuous schedule.

The Section on Orthopedic Surgery had two exhibits in conjunction with a motion picture program. The committee in charge was composed of Paul N. Jepson, Philadelphia; J. T. O'Ferrall, New Orleans, and E. B. Mumford, chairman, Indianapolis.

The Section on Gastro-Enterology and Proctology, with a committee made up of Curtice Rosser, Dallas, Texas; F. D. Gorham, St. Louis, and A. H. Aaron, chairman, Buffalo, showed six exhibits.

The Section on Radiology sponsored seven exhibits besides the large amount of radiologic material found in the exhibits of other sections. The committee was as follows: Amédée Granger, New Orleans; Ernest C. Samuel, New Orleans, and Charles L. Martin, chairman, Dallas, Texas.

The Section on Urology took part in the Scientific Exhibit under the auspices of a committee of which George Gilbert Smith was chairman.

Besides three special exhibits and seventy exhibits under the auspices of different sections, there were thirteen pathologic and laboratory exhibits, eight surgical and anatomic and twenty-two in the educational classification, making 116 in all.

REPORT OF THE COMMITTEE ON AWARDS

The Committee on Awards reports:

CLASS I

[Awards in Class I are made for exhibits of individual investigations, which are judged on the basis of originality and excellence of presentation.]

The gold medal to Frank A. Hartman, C. W. Greene, J. J. Maisel and G. W. Thorn, University of Buffalo, Buffalo, for original investigative work on the development and use of a hormone from the suprarenal cortex and excellence of presentation.

The silver medal to C. W. Emmons, College of Physicians and Surgeons, Columbia University, New York, for original work on the variations in ringworm fungi and excellence of presentation.

The bronze medal to J. A. Bargen, P. W. Brown and H. M. Weber, Mayo Clinic and Mayo Foundation, Rochester, Minn., for original investigation of diseases of the colon and excellence of presentation.

Certificates of Merit, Class I, were awarded to the following (alphabetically arranged):

To Abraham Levinson, Chicago, for exhibit illustrating continuation of investigations on the cerebrospinal fluid.

To Alton Ochsner, Earl Garside and Ambrose Storck, Department of Surgery, Tulane University Medical School, New

Orleans, for exhibit illustrating the use of digestive ferments in prevention of adhesions.

To Sidney J. Wilson and Simeon H. Hulsey, Fort Worth, Texas, and Fred D. Weidman, Philadelphia, for exhibit illustrating excellent studies on chromoblastomycosis in Texas.

In addition, the following exhibit is deemed worthy of Honorable Mention:

That of John W. Towey, Powers, Mich., Willis H. Huron, Iron Mountain, Mich., and Henry C. Sweany, Chicago, for exhibit on occupational sensitization to fungus spores found in maple bark.

CLASS II

[Awards in Class II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of excellence of correlating facts and excellence of presentation.]

The gold medal to Max Ballin and Plinn F. Morse, Harper Hospital, Detroit, for excellence of presentation of exhibit on parathyroidism.

The silver medal to L. G. Rowntree and C. H. Greene, Mayo Clinic and Mayo Foundation, Rochester, Minn., for excellence of presentation of exhibit of comprehensive study on Addison's Disease.

The bronze medal to Ernest Carroll Faust, Department of Tropical Medicine, Tulane University Medical School, New Orleans, for excellence of presentation of exhibit on human helminth infections.

Certificates of Merit, Class II, were awarded to the following (alphabetically arranged):

To Chevalier Jackson and Chevalier L. Jackson, Temple University School of Medicine, Philadelphia, for excellence of presentation of exhibit illustrating tumors of the lungs and tracheobronchial tree.

To Frank C. Neff, D. N. Medearis and Margaret Anderson, Department of Pediatrics, University of Kansas School of Medicine, Kansas City, Kan., for excellence of presentation of exhibit illustrating a study of the newly born.

To Henry F. Vaughan, Detroit Department of Health, Detroit, for excellence of presentation of exhibit illustrating plan of medical participation of the general practitioner in a public health program.

In addition, the following exhibits are deemed worthy of Honorable Mention:

That of Francis Clark Grant, University Hospital, Philadelphia, for excellence of demonstration of exhibit on ventriculography.

That of O. E. Denney, National Leprosarium, Carville, La., for exhibit on leprosy. (This work has been recognized by awards at previous Scientific Exhibits of the American Medical Association.)

The Committee on Awards commends especially the group exhibit of the Mayo Clinic and Mayo Foundation as a model of presentation.

EDUCATIONAL CLASSIFICATION

A special Certificate of Merit is awarded to the American Society for the Control of Cancer for a cooperative exhibit on cancer as the best exhibit in the educational (national organizations) classification.

The Committee on Awards commends the excellent demonstrations given in the special exhibits; namely, the exhibit on poliomyelitis, that on cancer and that on physical therapy.

The Committee on Awards extends to the Committee on Scientific Exhibit, to the Advisory Committee and to Dr. Thomas G. Hull, executive in charge, and to the active participants in the Scientific Exhibit, its appreciation. The committee feels that the Scientific Exhibit continues to be an extremely important and distinctive feature of the annual session.

The committee also wishes to state that the cooperation of the twelve sections in arranging special exhibits has been of great value.

HENRY E. HELMHOLZ, Chairman, Rochester, Minn.
FRANK W. HARTMAN, Detroit.
ROGER I. LEE, Boston.
THOMAS G. ORR, Kansas City, Mo.
EUGENE P. PENDERGRASS, Philadelphia.

REGISTRATION AT NEW ORLEANS

The total registration at the New Orleans session was 2,778. Below are given two summaries—one by sections and one by states:

Registration by Sections

Practice of Medicine	725
Surgery, General and Abdominal	526
Obstetrics, Gynecology and Abdominal Surgery	204
Ophthalmology	172
Laryngology, Otology and Rhinology	168
Diseases of Children	198
Pharmacology and Therapeutics	24
Pathology and Physiology	90
Nervous and Mental Diseases	99
Dermatology and Syphilology	84
Preventive and Industrial Medicine and Public Health	112
Urology	107
Orthopedic Surgery	67
Gastro-Enterology and Proctology	67
Radiology	93
Miscellaneous (two or more sections or no section marked)	37
Total	2,778

Registration by States

Alabama	104	New Hampshire	1
Arizona	3	New Jersey	22
Arkansas	49	New Mexico	4
California	71	New York	156
Colorado	38	North Carolina	17
Connecticut	11	North Dakota	3
District of Columbia	35	Ohio	97
Florida	62	Oklahoma	49
Georgia	57	Oregon	7
Idaho	2	Pennsylvania	107
Illinois	156	Rhode Island	3
Indiana	46	South Carolina	24
Iowa	31	South Dakota	3
Kansas	39	Tennessee	71
Kentucky	32	Texas	304
Louisiana	642	Vermont	3
Maine	4	Virginia	39
Maryland	21	Washington	9
Massachusetts	49	West Virginia	10
Michigan	71	Wisconsin	30
Minnesota	52	Wyoming	7
Mississippi	119	Foreign	16
Missouri	88		
Montana	1	Total	2,778
Nebraska	13		

Association News

ABSTRACT OF MINUTES OF MEETINGS OF BOARD OF TRUSTEES HELD MAY 7-12, 1932

Meetings of the Board of Trustees were held at the Roosevelt Hotel, New Orleans, on Sunday, May 7, and on ensuing days during the annual session of the Association.

REPRESENTATIVE ON SECTION N OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Dr. William H. Park was appointed to represent the American Medical Association on section N of the American Association for the Advancement of Science.

DISCHARGE OF COMMITTEES TO STUDY ANESTHESIA ACCIDENTS

It was deemed advisable to dissolve the two special committees on anesthesia of the Council on Pharmacy and Chemistry, to ask the Council on Scientific Assembly to discharge its Committee on Anesthesia, to ask the secretary of the Council on Pharmacy and Chemistry to receive reports of accidents and to transmit them to the respective referees for advice, and to request the chairman of the Council to appoint special investigating committees if need arises.

POSTPONEMENT OF PUBLICATION OF THE THIRTEENTH EDITION OF THE AMERICAN MEDICAL DIRECTORY

Since it appears reasonably certain that because of the financial depression it will not be possible to issue a new edition of the American Medical Directory in 1933 without serious

loss, it was decided to postpone the publication of the thirteenth edition until 1934.

REPRESENTATIVES TO MEETING OF BRITISH MEDICAL ASSOCIATION

Dr. George H. Simmons, Dr. Edmund Horgan and Dr. Henry O. Reik were appointed to represent the American Medical Association at the meeting of the British Medical Association to be held in July.

ELIMINATION OF ADVERTISEMENTS OF DIATHERMY APPARATUS MANUFACTURED BY FIRMS THAT PROVIDE CLINICAL INSTRUCTIONS IN PHYSICAL THERAPY PROCEDURES

The Board of Trustees voted to instruct the Advertising Committee of the Association not to accept advertisements of diathermy apparatus manufactured by firms that employ persons to give clinical instruction in physical therapy procedures.

SERIES OF ARTICLES ON ELECTROCARDIOGRAPHY

The Board approved the publication in THE JOURNAL, and later in book form, of a series of articles on electrocardiography, which, it is hoped, will provide light on the subject for the general practitioner.

RESOLUTIONS FROM THE HOUSE OF DELEGATES

Resolutions referred to the Board of Trustees by the House of Delegates were given careful consideration and reports on these were made to the House.

JOINT MEETING OF BOARD OF TRUSTEES AND SPECIAL JOURNAL EDITORS

Provisions were made for a joint meeting of the Board of Trustees with the editors of the special journals published by the American Medical Association during the week of the meeting in Milwaukee in 1933.

APPRECIATION OF SERVICE RENDERED BY MEMBERS OF COUNCILS

The editor of THE JOURNAL was instructed to prepare for publication an editorial pointing out the service rendered by members of the various councils and the amount of time required to perform that service, so that the medical profession may have a clearer idea of what the members of these councils are doing for the Association without remuneration.

REORGANIZATION OF BOARD OF TRUSTEES

At its last meeting, on Thursday, the Board of Trustees reorganized and the following officers and committees were appointed: Dr. A. R. Mitchell, Chairman; Dr. J. H. J. Upham, Vice Chairman; Dr. J. H. Walsh, Secretary. Executive Committee and Finance Committee: Drs. J. H. J. Upham, Rock Sleyster and J. H. Walsh. Committee on Scientific Exhibit: Drs. D. Chester Brown (Chairman), A. W. Booth and Allen Bunce.

The date of the September meeting of the Board was fixed as September 22 and 23.

Other matters also were given careful consideration.

MEDICAL BROADCAST FOR THE WEEK

American Medical Association Health Talks

The American Medical Association broadcasts on Monday and Wednesday from 1:30 to 1:35 p. m. over Station WBBM (770 kilocycles, or 389.4 meters). The Columbia Chain Program has been discontinued for the present.

The program for the week is as follows:

May 30. Holiday (no broadcast).
June 1. Granny Magic.

There is also a fifteen minute talk sponsored by the Association on Saturday morning from 11:15 to 11:30 over Station WBBM.

The program for the week is as follows:

June 4. How is Your Blood Pressure?

This schedule is based on Chicago Daylight Saving Time, one hour faster than Central Standard Time.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Society News.—Dr. James Vernon Luck, among others addressed the Los Angeles County Medical Association, May 19, on "The Schilling Differential in Appendicitis."——Included among the speakers before the Los Angeles Clinical and Pathological Society, May 26, was Dr. Clifford B. Walker on "Traumatic Bitemporal Hemianopsia with Analysis of Mechanism."——The Society for Neurology and Psychiatry was addressed, May 25, among others, by Dr. E. Huntington Williams on "Experiences with Sodium Rhodanate in Narcolepsy and Allied Conditions."

Urge Change in Laws Relating to Commitment of Insane.—A campaign for the improvement of California laws relating to the commitment of the insane was started at a meeting of county and state officials, welfare leaders and hospital executives at the University of California. Dr. Herman M. Adler, professor of psychiatry, University of California Medical School, Berkeley, presided, and the discussion was led by Dr. Glenn E. Myers, Los Angeles. It was pointed out that the commitment laws are antiquated, cumbersome and make humane examination and treatment of those suffering from mental disease almost impossible. The consensus of the group was that "it should be made as easy as possible for a person deserving treatment of a mental disorder to get into a California state hospital through the provision of the voluntary admission rule. Such voluntary admission should be encouraged, not discouraged."

DISTRICT OF COLUMBIA

District Bill in Congress.—S. 4704, by Senator Blaine, Wisconsin, to amend the healing arts practice act of the District of Columbia to provide that the act shall not be construed so as to deny a license by reciprocity "to physicians who were licensed prior to 1905."

District Medical Election.—Dr. Harry A. Fowler was elected president of the Medical Society of the District of Columbia at its annual meeting, May 4. Other officers of the society are Drs. Henry R. Schreiber and Helen Gladys Kain, vice presidents, and Coursen B. Conklin, secretary. The next annual meeting will be held, May 3, 1933.

Appointments at George Washington University.—The following new appointments to the teaching staff of the George Washington University School of Medicine, Washington, D. C., for the coming academic year have been announced, among others:

Dr. Errett Cyril Albritton, professor of physiology and executive officer of the department.
Vincent du Vigneaud, Ph.D., professor of biochemistry and executive officer of the department.
Leland W. Parr, Ph.D., associate professor of bacteriology.
Dr. Roscoe Roy Spencer, associate professor of hygiene and preventive medicine.
Chester E. Leese, Ph.D., assistant professor of physiology.
John H. Hanks, Ph.D., assistant professor of bacteriology.
Elizabeth Verder, Ph.D., assistant professor of bacteriology.
Dr. William H. Jenkins, clinical professor of otorhinolaryngology.
Dr. Loren B. T. Johnson, associate in pediatrics.
Dr. Edgar M. McPeak, associate in radiology.
Dr. Isidore Lattman, associate in radiology.
Dr. Montgomery Blair, Jr., clinical instructor in pediatrics.
Dr. Jeter C. Bradley, clinical instructor in otorhinolaryngology.
Dr. Paul F. Dickens, clinical instructor in medicine.
Dr. Addison M. Duvall, clinical instructor in psychiatry.
Dr. Bernard L. Hardin, Jr., clinical instructor in medicine.
Dr. George A. Holm, clinical instructor in medicine.
Dr. Spencer V. Meade, clinical instructor in medicine.
Dr. William G. Young, clinical instructor in urology.
Dr. Samuel A. Silk, clinical instructor in psychiatry.

FLORIDA

Radiologic Meeting.—Dr. Orion O. Feaster, St. Petersburg, was elected president of the Florida Radiological Society at its meeting in Sarasota, May 2; Dr. Frederick K. Herpel, West Palm Beach, was made vice president, and Dr. W. McL. Shaw, Jacksonville, secretary. Informal presentation of case reports and demonstrations of roentgenograms were features of a morning and an afternoon session. The society was organized, Nov. 14, 1931.

State Medical Election and Program.—Dr. Gerry R. Holden, Jacksonville, was elected president of the Florida

Medical Association at its fifty-ninth annual convention in Sarasota recently, succeeding Dr. Gaston H. Edwards, Orlando. The vice presidents are Drs. Jack Halton, Sarasota, Eugene G. Peek, Ocala, and William C. Thomas, Gainesville. Dr. Shaler A. Richardson, Jacksonville, was reelected secretary. The next annual meeting of the association will be held in Hollywood. Dr. Walter L. Bierring, Des Moines, Iowa, guest of honor at this meeting, spoke on "Present Status of Heart Lesions." Drs. Simon E. Driskell, Jacksonville, spoke on "A Proposed Compensation Act and Its Relation to the Physician"; Spencer A. Folsom, Orlando, "Modern Treatment of Thyrotoxicosis"; Frank C. Metzger, Sarasota, "Hay Fever in Florida"; Roscoe H. Knowlton, St. Petersburg, "Diabetes in the Home"; Robert G. Nelson, Tampa, "Amelioration of Labor Pains"; Gideon Timberlake, St. Petersburg, "Urinary Obstruction: Recognition of Cause and Its Relief," and Mozart A. Lischkoff, Pensacola, "Recent Progress in Juvenile Sinusitis."

ILLINOIS

Society News.—The Lincoln County Medical Society was addressed, April 22, at Lincoln, by Dr. Jonas Curtis Lyter, St. Louis, on diseases of the coronary arteries.——Dr. William T. Coughlin, St. Louis, discussed "Brain Tumors That Are Overlooked" before the St. Clair County Medical Society in East St. Louis, May 5.——A symposium on nephritis constituted the program of the Adams County Medical Society, Quincy, May 9; the speakers were Drs. Richard A. Harris, Walter M. Whitaker and Seldon R. Hoover, Jr., all of Quincy. ——Dr. Ben Z. Rappaport, Chicago, addressed the Peoria City Medical Society, May 3, on "Diagnosis and Treatment of the Common Allergic Conditions."

Chicago

Rush Medical College Holds Alumni Reunion.—Alumni of Rush Medical College will hold their annual reunion, beginning June 9 and continuing through June 15. Clinics will be held on June 13 at Rush Medical College and on June 14 at Billings Hospital. On June 13 the classes of 1882 and 1912 will meet at special banquets.

Society News.—Dr. Sidney J. Silbar, Milwaukee, addressed the Chicago Urological Society, May 25, on "Pain as a Diagnostic and Prognostic Symptom in Gonorrhea."——The Chicago Council of Medical Women will be addressed, June 3, by Drs. Katharine M. Howell on "Vaccine Therapy in Arthritis," and Ernestine V. Kandel, "Blood Findings and Therapy in the Anemias."

Licenses Revoked.—The state department of registration and education at Springfield revoked the licenses of Drs. Thomas J. Ney and Wilhelm Loeser, April 13. Dr. Ney's license, which was issued in 1922, was revoked on the ground of his conviction of manslaughter. The license of Dr. Loeser, which was issued in 1905, was revoked because he was found guilty of violation of the Harrison Narcotic Act. Dr. Clifford Judson Spruce's license was revoked, May 2, on the ground of his connection with unlicensed persons. The license of Dr. Maurice J. Rabbins was suspended for one year, April 13, because of his conviction of violation of the Harrison Narcotic Act.

Gilmore Memorial Foundation.—The Eugene S. Gilmore Memorial Foundation was recently established in honor of the late Mr. Gilmore, superintendent of Wesley Memorial Hospital for twenty-five years. He was also a past president of the American Hospital Association and its senior trustee. The purpose of the foundation is to create a fund, the income of which will be used in establishing scholarships for the graduates of Wesley Memorial Hospital School of Nursing. The fund will also provide for a tablet or medallion, which will be placed in the new Wesley Memorial Hospital when it is completed. Subscriptions are being received by Dr. Mark T. Goldstine, treasurer of the foundation.

Gibbs Medal Awarded.—Edward Curtis Franklin, Ph.D., professor emeritus of organic chemistry, Stanford University, California, was presented with the Willard Gibbs Medal of the Chicago section of the American Chemical Society, May 20. Dr. Franklin is the twenty-first Gibbs medalist to receive the award for "eminent work in and contribution to pure or applied chemistry," the particular field in this case being researches wherein liquid ammonia would be substituted for many important reactions involving water. Dr. Franklin received the degree of doctor of philosophy from Johns Hopkins University in 1894. He was professor of chemistry and chief of the division of chemistry, U. S. Public Health Service, 1911-1913. In 1903 he joined the faculty of Stanford University as associate professor of organic chemistry.

IOWA

Society News.—Dr. Archibald F. O'Donoghue, Sioux City, among others, addressed the Crawford County Medical Society, April 12, in Denison, on "Traction and Extension in Fractures."——The Dallas-Guthrie Counties Medical Society was addressed in Panora, April 21, by Drs. Charles A. Nicoll, Linden, and William R. Van Duzer, Casey, on "Management of Infants Under One Year" and "Diseases of Old Age," respectively.——Dr. Ralph A. Reis, Chicago, addressed the Scott County Medical Society, April 5, on "Appendicitis in Pregnancy."——At the April 22 meeting of the Tama County Medical Society in Dysart, Dr. Frank R. Peterson, Iowa City, talked on recent methods of diagnosis and treatment of carcinoma of the breast.

MARYLAND

Twins in Maryland.—In every fifty live births in Maryland last year, the state department of health reports, there was an average of one set of twins. The total number of live births recorded in the state in 1931 was 28,705. This number includes 298 sets of twins, 596 children, or 2 per cent of the total. In the total of 2,233,149 births in the birth registration area of the United States, it was stated, there were 23,863 sets of twins, 47,726 children, or 2 per cent of the total. These figures, like those for Maryland, do not include the plural births in which one or both children died. The figures for Maryland last year indicate that one set of living twins was born to each 100 mothers.

Survey of School Children.—About 75 per cent of the school children in Anne Arundel County have one or more physical defects, according to a report of a survey just completed for the state health department by the director of the county health department. In this survey, which required repeated visits to the seventy-three grammar schools in the county, 5,200 children were examined and 9,000 inspections for communicable diseases were made. Seventy-one per cent of the white children examined and 81 per cent of the Negroes were defective. In both classes dental defects predominated. Local health workers will follow up these examinations by visiting the children's homes. The Anne Arundel unit was established as a "model" organization in August, 1931. It is maintained by the Rockefeller Foundation, Johns Hopkins School of Hygiene and Public Health, the Anne Arundel County commissioners and the state department of health.

Review Course for General Practitioners.—The division of medical extension of the University of Maryland announces its ninth annual review course for physicians, beginning June 6 and extending to June 24. This is a general course, designed to give to the physician in general practice the opportunity to study methods of diagnosis and treatment in current use in the university clinics. Preference will be given to physicians registered in Maryland. A matriculation fee of $25 will be charged to these registrants, while a charge of $50 will be made to those coming from other states. Morning lectures will deal with modern advances in diagnosis and treatment, the subjects to be chiefly in the field of general medicine and surgery, with a few lectures devoted to specialties. There will be a daily clinic. The class, which has been limited to twenty, will be assigned in groups in rotation to the dispensary clinics for pediatrics, genito-urinary diseases, syphilis and gastro-intestinal diseases. In the afternoon periods, instruction will be given in the laboratory methods of diagnosis. Electrocardiography and the interpretation of electrocardiograms will be briefly presented. Complete information may be obtained from the dean of the medical school, University of Maryland, Baltimore.

MICHIGAN

Society News.—Dr. Gordon E. Richards, Toronto, addressed a joint meeting of the Wayne County Medical Society with the Detroit Roentgen-Ray and Radium Society, May 3, on "Value of Roentgenology in the Diagnosis and Control of Treatment of Pulmonary Tuberculosis."——Chalmer J. Lyons, D.D.S., Ann Arbor, addressed the Washtenaw County Medical Society, May 10, on "Relation of the Mouth to Disease."——Dr. Egil T. Olsen, Detroit, was elected president of the Michigan Hospital Association, April 27.——Dr. Grover C. Penberthy, Detroit, was elected president of the Michigan Association of Industrial Physicians and Surgeons, April 29, and Dr. Howell L. Begle, Detroit, secretary.——Dr. Floyd H. Lashmet, Ann Arbor, addressed the Oakland County Medical Society, Pontiac, May 19, on "Water Balance Treatment of Edema."

New X-Ray Unit.—The new x-ray department of the University of Michigan Hospital was recently opened. The

unit, which is said to be unexcelled in the country, has a novel plan of rooms and apparatus. From waiting rooms the patients are directed to private dressing rooms from which they pass to the proper department. The rapid development of films is made possible by a dark room, provided with dry air from which all moisture has been chilled out by refrigerating machinery. From the drying rack they may be taken directly to the physicians' offices, each of which has its own viewing apparatus, so that a report may be given in a fraction of the usual time needed. Memorializing Dr. Preston M. Hickey, for many years head of the department, *Science* states, is a staff library which will contain publications on roentgenology, given by Dr. Hickey's friends. The memorial bas-relief of Dr. Hickey, presented recently by the American Roentgen Ray Society, has been hung in the special conference room set aside for the members of the hospital staff who wish to review the examination of the patients with members of the roentgenology staff.

MISSOURI

Personal.—Winterton C. Curtis, Ph.D., professor of zoology, University of Missouri, Columbia, will spend a year as visiting professor at Keio Gijiku University of Tokyo, Japan, under a grant from the Rockefeller Foundation. *Science* states that Dr. Curtis will maintain an office in the Keio School of Medicine, in a building erected by the Rockefeller Foundation. He will give instruction in the school and carry on research. ——Dr. Walter S. Hull, Faucett, was reappointed health officer of Buchanan County recently.

Society News.—Dr. George B. Arnold, Kansas City, was elected president of the Kansas City Urological Society recently.——Dr. Albert N. B. Lemoine was recently elected president of the Kansas City Society of Ophthalmology and Otolaryngology.——A joint meeting of the St. Louis dental and medical societies, May 10, was addressed, among others, by Arthur C. Engel, D.D.S., on "Oral Surgery from a Dental Standpoint"; Dr. Ralph A. Kinsella, "Dental Manifestations in Systemic Diseases," and O. W. Brandhorst, D.D.S., "Facial Development and the Care of the Teeth."——The St. Louis Medical Society was addressed, April 26, by Drs. James R. Nakada on "Tularemia—Three Cases with Remarkable Recovery in Two," and William K. McIntyre, "Precancerous Changes in the Rectum."——Speakers before the Nodaway County Medical Society in Maryville, May 13, were Drs. Benjamin Landis Elliott and Ralph E. Duncan, Kansas City, on "Encephalitis Lethargica" and "Modern Use of Oxygen as a Therapeutic Agent," respectively.——Dr. Percival Bailey, Chicago, addressed the Kansas City Academy of Medicine, May 20, on "Histological Structure and Prognosis of Gliomas of the Brain."

NEW JERSEY

Research Laboratory.—Ground was recently broken for the erection of a research laboratory at the plant of Merck and Company, Inc., Rahway. A south wing will be devoted to carrying on pure or fundamental research, for which three laboratories will be provided. Another laboratory will be fitted for biochemical research with an adjoining incubator room containing a sterilizer, incubator and other necessary equipment. In a pharmacologic laboratory the physiologic action of various chemicals will be investigated. There will also be a laboratory for micro-analysis, a microbalance room, an ordinary balance room and an ice room. The north wing will contain a large chemical laboratory suitable for twelve chemists carrying on applied research and development work. The central section will contain, among other things, a library.

NEW YORK

Society News.—The annual tumor clinic of the Memorial Hospital, Albany, was held, May 4, in collaboration with the New York state departments of health and education. Addresses were made by Drs. Lloyd F. Craver, New York, on "Leukemia, Hodgkin's Disease and Other Tumors of the Lymphatic System," and George T. Pack, New York, "Cancer—Its Cure and Prevention."

Unlicensed Practitioner Sentenced.—The state education department of the University of the State of New York reports the conviction of James Bockman in the Court of Special Sessions recently on a charge of practicing medicine without a license. He was sentenced to serve four months in the workhouse and in addition to pay a fine of $250 or in default of payment to spend sixty days additional in the workhouse. Bockman claimed to be a graduate of the Kansas City College of Medicine and Surgery and admitted that he had been licensed in Connecticut but that this license has been revoked because his schools were unqualified. He holds a license issued to him, May 10, 1922, on examination by the Arkansas Eclectic Board of Medical Examiners. Bockman appealed from his first conviction on this charge, but it was upheld by the supreme court and the case was remanded to the trial court for resentence, March 16, when a heavier sentence was imposed.

New York City

Dr. Ewing Appointed Director of Memorial Hospital.—Dr. James Ewing, who recently resigned after thirty years as professor of pathology at Cornell University Medical College, has been appointed director of Memorial Hospital for the Treatment of Cancer and Allied Diseases in full charge of all its departments and activities, effective July 1. Dr. Ewing, a native of Pittsburgh, received his medical degree from Columbia University College of Physicians and Surgeons in 1891 and was instructor in clinical pathology at his alma mater for several years before becoming affiliated with Cornell. He has been director of cancer research at Memorial Hospital for a number of years and is the author of a book on cancer as well as many articles on pathology.

Noise Abatement Commission.—Announcement has been made of the dissolution of the Noise Abatement Commission, bringing to an end its three-year study of noise in New York. However, at the request of the city health commissioner and the police commissioner, the members of the commission have agreed to continue, as a body of private citizens, to assist the police and health departments in their work of helping to quiet the city. The final report of the commission will be published in the fall. It will outline the methods by which the commission believes a municipality may achieve reasonable quiet and will discuss experiments carried on by the commission since the publication of its first report in 1930. The Noise Abatement Commission was appointed in 1929 to define New York's noise problem, to ascertain its effect on the inhabitants, and to evolve methods for relief. The commission's preliminary report, published in 1930, dealt with the first two of these problems, while the final report will deal with the third. When the commission was organized, it was said to be the first official noise abatement commission (THE JOURNAL, Oct. 26, 1929, p. 1317).

Society News.—Drs. Russell S. Fowler and Emanuel D. Friedman addressed the Medical Society of the County of Kings, May 17, on "Gallbladder Disease—End-Results in a Study of One Thousand Cases" and "Experiences with Encephalography and Its Evaluation in Clinical Neurology," respectively.——Dr. John H. Garlock, Jr., addressed the New York Surgical Society, May 11, on "Free Full Thickness Graft."——Drs. Lewellys F. Barker, Baltimore, and Benjamin H. Archer addressed the Bronx County Medical Society, May 18, on private group clinics and evolution of group practice, respectively.——Dr. Henry L. Jaffe, among others, addressed the New York Pathological Society, May 26, on "Factors Influencing Types of Bone Resorption."——Dr. George Baehr delivered an afternoon lecture before the Medical Society of the County of Queens, May 20, on treatment of diabetes.——A symposium on middle age was presented at the meeting of the Medical Society of the County of New York, May 27, with the following participants: Drs. Nellis B. Foster, Russell L. Cecil, Arthur M. Fishberg, Foster Kennedy and Robert T. Frank.

OHIO

Academy Adopts Industrial Code.—A plan of procedure to be used by members of the Academy of Medicine of Cleveland desirous of making contact with industrial firms was approved, April 12, by the board of directors and the council. According to the plan, members of the academy before offering their services to an employer shall ascertain in writing through the executive office of the academy whether the firm desires the services of an industrial physician.

Illegal Practitioners Prosecuted.—The following is a list of illegal practitioners recently prosecuted, among others, by the state medical board:

C. M. Dyhre, unlicensed practitioner of medicine; found guilty of conducting an office without a certificate; fined $25 and costs.
Grant C. Pruner, charged with advertising; pleaded guilty; fined $200 and costs; suspended on promise to quit.
Glen Arnold, unlicensed chiropractor; found guilty of advertising and announcing himself as a practitioner without a certificate; fined $50 and costs.
Paul A. Hemple, charged with illegal practice of medicine; found guilty and fined $250 and costs.
D. A. Row, found guilty of practicing medicine illegally.

Society News.—The Mahoning County Medical Society was addressed, May 19, by Dr. Temple S. Fay, Philadelphia, on "Intracranial Pressure Problems Encountered in General Medicine."——The Academy of Medicine of Cincinnati was addressed, May 16, by Drs. Hiram B. Weiss and Harry L.

Claassen on "Hereditary Factors in Vascular Disease" and "A Newer Method in the Treatment of Chancroid," respectively. ——Dr. Jonathan Forman, Columbus, addressed the Summit County Medical Society, May 10, on "Atopy in General Practice."——Dr. Irving S. Cutter, Chicago, will address the Montgomery County Medical Society, Dayton, June 3, on "The Story of Childbed Fever."

OREGON

Joyce Lecture.—Dr. William Darrach, dean emeritus and professor of clinical surgery, Columbia University College of Physicians and Surgeons, New York, delivered the annual Joyce Lecture of the Portland Academy of Medicine, April 21, on "Colles' Fracture." The Portland City and County Medical Society attended the lecture in lieu of holding its regular meeting for April.

Dr. Cannon Gives Jones Lectures.—The eighth Noble Wiley Jones lectures at the University of Oregon Medical School were recently given by Dr. Walter B. Cannon, George Higginson professor of physiology, Harvard University Medical School, Boston. The titles of his addresses were "The Fluid Matrix as a Means of Stabilizing the Organism" and "The Function of the Autonomic Nervous System in Controlling the Fluid Matrix."

PENNSYLVANIA

Hospital News.—The unveiling of a portrait of Dr. William T. Sharpless, first physician at the Chester County Hospital, West Chester, was a feature of the institution's fortieth anniversary and founders' day celebration, May 12. Dr. U. Grant Gifford, Kennett Square, president of the medical staff, presented the portrait, which was a gift of the board of managers, the staff, the women's auxiliary and the nurses' alumnae association.

Society News.—Drs. Willis F. Manges, Philadelphia, and William W. G. Maclachlan, Pittsburgh, addressed the annual meeting of the eleventh councilor district of the Medical Society of the State of Pennsylvania, May 19, at the Nemacolin Country Club, near Washington.——At a meeting of the Allegheny County Medical Society, Pittsburgh, May 17, addresses were presented by Drs. Charles H. Henninger, on "Mental Hygiene and Industry"; Paul Titus, "Value of Clinical Research in a General Hospital"; Theodore O. Elterich, "Preventive Treatment of Measles—A Public Health Problem," and C. Leonard O'Connell, Ph.G., "Reciprocal Aspects of Medicine and Pharmacy."

RHODE ISLAND

Bill Enacted.—H. 820, to require all hospitals, except state institutions, maternity hospitals or convalescent homes, to be licensed by the state public health commission, has become a law.

License Revoked.—The medical certificate of Dr. George Roy, Central Falls, was revoked by the Rhode Island State Public Health Commission, April 14, because of his having performed an illegal operation. Dr. Roy, who was convicted and sentenced in Worcester, Mass., served a prison term.

Hospital Council Organized.—A Council of Hospital Superintendents for Rhode Island was organized, March 18. According to *Modern Hospital*, the objects of the organization are cooperation among the administrators of hospitals in Rhode Island, promotion and coordination of their work, promotion of economy and efficiency in hospital management, and development of participating relationships with the organized medical profession, state and city authorities and unofficial agencies.

Society News.—The Providence Medical Association was addressed, May 2, by Drs. Eske H. Windsberg and Samuel Morein on "Thoracoplasty in the Treatment of Chronic Pulmonary Tuberculosis" and "Diaphragmatic Hernia: Symptomatology and Diagnosis," respectively.——A motion picture showing the results of gastro-enterostomy was shown at the meeting of the Newport County Medical Society, Newport, May 10.—— A series of informal medical conferences was inaugurated by the division of university health at Brown University recently for Providence physicians. Dr. John S. Hodgson, Boston, was the guest in March, speaking on neurosurgical problems, and Dr. Charles S. Kubik, Boston, spoke at the April meeting on brain tumors and abscesses.

SOUTH CAROLINA

Bill Enacted.—H. 1351, to create a board of chiropractic examiners and to regulate the practice of chiropractic, has become a law.

TEXAS

State Medical Election.—Dr. A. A. Ross, Lockhart, was designated president-elect of the State Medical Association of Texas at its meeting in Waco, May 4-7. Dr. John H. Foster, Houston, assumed the presidency, and other officers elected were Drs. Andrew D. Nelson, San Saba; Herschel F. Connally, Waco, and Robert Y. Lacy, Pittsburg, all vice presidents; Holman Taylor and Khleber H. Beall, both of Fort Worth, secretary and treasurer, respectively, reelected. The 1933 meeting of the association will be in Fort Worth.

Special Societies Elect.—Officers of three special societies which met in conjunction with the State Medical Association of Texas in Waco, May 4-7, were elected at the closing sessions. Dr. John A. McIntosh, San Antonio, was elected president of the Texas Neurological Society, and Dr. Wilmer L. Allison, Fort Worth, secretary. Dr. Clark A. Wilcox, Wichita Falls, was named president-elect of the Texas Radiological Society, and Dr. Eugene V. Powell, Temple, secretary. Dr. Irwin E. Colgin, Waco, was elected president of the Texas Railway Surgeons' Association, and Dr. Ross B. Trigg, Fort Worth, secretary.

WISCONSIN

Society News.—Dr. Vilray P. Blair, St. Louis, and George W. Wilson, D.D.S., addressed a joint meeting of the Medical Society of Milwaukee County and the Milwaukee County Dental Society, May 20, on "Surface Repairs for Both Function and Appearance" and "Medical-Dental Relations," respectively.——Dr. Leonard G. Rowntree, Rochester, Minn., made an address on "Water in Health and Disease" before the Milwaukee Academy of Medicine, May 17.——The radiologic section of the State Medical Society of Wisconsin held its spring meeting in Madison, May 27-28. Among speakers were Drs. Maximilian J. Hubeny, Chicago, on "The Radiologist and the Medical Profession"; Silvanus A. Morton, Milwaukee, "Radiological Diagnosis of Congenital Dislocation of the Hip," and Hans W. Hefke, Milwaukee, "Limitations of Intravenous Urography." A symposium on "Roentgen Diagnosis and Management of Bone Lesions" was presented by Madison radiologists.

GENERAL

American Urological Association.—The twenty-ninth annual meeting of the American Urological Association will be held in Toronto, Ont., Canada, May 31-June 2, under the presidency of Dr. Alexander Randall, Philadelphia. Dr. Randall will give his presidential address at a meeting, June 1. At this session also the Ramon Guiteras Lecture will be delivered by Mr. Henry Wade, Edinburgh, Scotland, on "The Balanced Urinary Tract." Dry clinics will be held the first two days from 8 to 10 a. m., under the direction of the urologists of Toronto.

Medical Bills in Congress.—*Changes in Status:* H. R. 4743 has passed the House, providing federal subsidies to the several states to aid in rehabilitating persons disabled in industry or otherwise. The House Ways and Means Committee held hearings, May 19, on H. R. 11082, a bill to remove certain restrictions now imposed by law on the dissemination of articles and information for the prevention of conception. A similar bill in the Senate, S. 4436, was considered by a subcommittee of the Judiciary Committee, May 19 and 20. H. R. 10236, referred to as the tax bill, has been favorably reported to the Senate, with amendments. As passed by the House, it carried language which was interpreted as imposing a 10 per cent tax on eyeglasses and spectacles. The Senate Finance Committee, however, eliminated this language.

Bulletin of the Health Organizations of League of Nations.—In order to make the material developed through the Health Organizations of the League of Nations more widely known and more easily available, a quarterly bulletin has been established for general circulation. The first issue provides the resolutions of the Conference on Immunization Against Diphtheria, held in London in June, 1931; a discussion of medical education in England by Sir George Newman; a report on the milk supply of North American cities; another on tropical pneumonia; another on antirabies treatment, and one on floods in China. The material is authentic, well presented and in good English. The subscription price is to be $2 a year, single copies 50 cents. It may be obtained from the Publications Department of the League of Nations in Geneva, or through authorized agents, such as the World Peace Foundation, 40 Mount Vernon Street, Boston 9, Mass.

Society News.—At the recent annual meeting of the American Society for Experimental Pathology, Dr. Francis

Peyton Rous, New York, was elected president; Dr. Carl V. Weller, Ann Arbor, vice president, and Dr. C. Phillip Miller, Jr., Chicago, reelected secretary. —— Among speakers at the annual meeting of the American Drug Manufacturers' Association, White Sulphur Springs, W. Va., in April, was Paul N. Leech, Ph.D., director, Chemical Laboratory, American Medical Association, Chicago, on "How Manufacturers Can Cooperate with the Council on Pharmacy and Chemistry of the American Medical Association."——Dr. Mary O'Malley, Washington, D. C., was made president-elect of the Medical Women's National Association at the annual meeting in New Orleans, May 9.——Dr. Curtice Rosser, Dallas, Texas, was elected president of the American Proctologic Society in Memphis, Tenn., May 7.——Dr. Arthur Dean Bevan, Chicago, was elected president of the American Surgical Association at its recent annual meeting in New Haven, Conn. The vice presidents are Drs. Frederick N. G. Starr, Toronto, and William F. Verdi, New Haven, and the secretary is Dr. Vernon C. David, Chicago, reelected.

Pacific Northwest Medical Association. — The tenth annual session of the Pacific Northwest Medical Association will be held in Spokane, Wash., June 27-29. The tentative program lists among the speakers Drs. Henry C. Bazett, Philadelphia, physiology; Samuel R. Cunningham, Oklahoma City, orthopedics and fractures; Harry Gideon Wells, Chicago, pathology; William J. Kerr, San Francisco, medicine; Philip H. Kreuscher, Chicago, orthopedics; Charles B. Wright, Minneapolis, medicine; Temple S. Fay, Philadelphia, neurosurgery; Henry E. Michelson, Minneapolis, skin and syphilis; Edgar L. Gilcreest, San Francisco, surgery; Fred W. Rankin, Rochester, Minn., surgery, and Richard T. Atkins, New York, otolaryngology. The subjects to be discussed will include circulation, methods of measurement and their clinical value; elbow injuries; adipose tissue; frequent mistakes in diagnosis of peripheral vascular disease; internal derangement of the knee joint; cerebral symptoms and manifestations throughout the field of medicine; diagnosis of cutaneous cancer; the common syndrome of rupture, dislocation and elongation of the tendon of the long head of the biceps; diagnosis and treatment of a typical hyperthyroidism, and intracranial complications of otitic origin, with special reference to the pathways of infection.

Resolution on Standard Ventilating Code.—The executive committee of the American Institute of Architects recently adopted a resolution setting forth the institute's opposition to any standard ventilating code until such time as an agreement between recognized authorities in the medical and engineering professions has been reached regarding minimum requirements for ventilation. It also opposes the promulgation or adoption of further codes, requirements, regulations or standards of ventilation until such agreement has been reached. In the resolution, attention is called to the tremendous annual expenditure for ventilating equipment, involving the health, welfare and comfort of the general public. The prevailing standards of practice in the ventilation of buildings are not supported by proved scientific facts, the resolution points out. It calls attention to the disagreement of competent hygienists and medical authorities with heating and ventilating engineers, on the basis of authentic physiologic data from reliable sources. The institute recommends the revision or repeal of present codes and regulations relating to the ventilation of buildings, wherever they are not supported by rational and authentic physiologic data acceptable to both the hygienist and the engineer. It favors the creation of a national movement to determine the factors to be considered in maintaining the health, comfort and safety of the occupants of buildings as affected by ventilation. These factors, when determined, would be used as the basis for a ventilating code of fundamental minimum standards generally applicable in all communities, the resolution further recommends. The resolution was adopted following the consideration of a similar one submitted by the Ohio State Association of Architects.

CORRECTION

State Board Statistics.—In THE JOURNAL for April 23, page 1470, the statement was made that Georgia, Kansas, Minnesota, New Hampshire, Oklahoma and South Dakota offered the easiest examinations, since they have reported no failures in the last five years. It should have been emphasized that Minnesota has a Basic Science Board and that there have been no failures because the Basic Science Board in most instances sifts out candidates not able to pass. The Minnesota Board of Medical Examiners, therefore, deals with a selected group.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 30, 1932.

Drug Addiction in Egypt

At a meeting of the League of Nations Advisory Committee on Traffic in Opium, Russell Pasha, director of the Egyptian central narcotics intelligence bureau, estimated that 282,000 of the Egyptian male population of 3,137,000 were addicted to hashish, 93,000 to opium and 54,000 to diacetylmorphine. A large reduction in "white drug" addicts had been brought about in three years, partly by the greed of the traffickers, who had increased the adulteration in the retail trade up to an average of 85 per cent and partly by the general economic situation. The fellaheen could no longer produce their daily 25 cents for dope. In spite of her efforts, Egypt had not been able so far to save herself from the narcotic nuisance. Russell Pasha thought it was time that trafficking should be looked on as an international offense. Turkey was still providing the contraband diacetylmorphine. He was much impressed by the determination of high Turkish officials to clear Istanbul of its reputation for being the center of illicit traffic in diacetylmorphine. But this could be done only by closing all the private factories and the establishment of a government factory in the interior of the country. There were also gaps in Greek legislation affecting narcotics, but the authorities had recently drafted complete legislation. He also hoped that the French authorities in Syria would lose no time in closing the breach in their legislation, which fails to make possession an offense. He appealed to the Italian delegate to help put a stop to the long established system of smuggling diacetylmorphine by the personnel of Italian steamships. The antinarcotic police of the affected countries were working in close cooperation, and the coming year would prove uncomfortable for the big contrabrand organizations. They were looking for new markets in which they could pervert the population to narcotic addiction. Their eyes were now on the Far East.

Anti-Cancer Education League

The British Empire Cancer Campaign has inaugurated a new movement in the form of the "Anti-Cancer Education League." At the opening meeting Dr. Malcolm Donaldson gave a lecture in which he appealed for consultation with the family physician periodically, especially for people over 40. Beyond question, cancer could be treated successfully if detected in an early stage. The main reason for failing to see a physician at this treatable stage was the common belief that if a swelling did not cause pain it could not be cancer. But the fact was that in many cases early cancer was painless and symptomless. It was impossible to teach the people symptoms; the only practicable method was to visit a physician twice a year, even though feeling quite well. Only thus could the alarming yearly incidence of 56,000 deaths be materially reduced. The Ministry of Health reported, in regard to cancer of the female breast, that, if it was attacked while still local, 80 per cent of the patients survived three or more years after treatment; whereas if treatment was delayed till after the formation of secondary growths, only 30 per cent or less survived this period. The records of the ministry showed that only half the patients with cancer sought advice and treatment at a curable stage. It was the policy of the league to have a branch in every town.

Sir William Watson Cheyne

Sir William Watson Cheyne, well known for the part he played in the introduction of Lister's antiseptic method into England, has died in his eightieth year. Born in the Shetland Islands of seafaring stock, his fair hair suggested the blood of

Scandinavian invaders of those parts, as did his love of the sea. Educated at Edinburgh, he came under the influence of Lister and many years later, in delivering the Lister memorial lecture, he described his first lecture from the great man thus: "I became fascinated with the subject and could not help seeing the wonderful era that was dawning on surgery." Lister was struck with Cheyne's ability and appointed him his dresser. In 1875, Cheyne graduated with honors and proceeded to Vienna and Strasbourg to study. In 1877, when Lister accepted the invitation to join the staff of King's College Hospital, London, he stipulated that he should be allowed to bring from Edinburgh four assistants trained in his methods, which were then new to London. Of these the principal was Cheyne, whom he appointed his house surgeon. Later Cheyne attained the post of assistant surgeon to the hospital and became a leading surgeon and president of the Royal College of Surgeons. He was well known for his works, mainly on the antiseptic system, including "Antiseptic Surgery," "A Manual of Surgical Treatment" in seven volumes (jointly with F. F. Burghard) and "Tuberculous Diseases of Bones and Joints."

Committee on Maxillofacial Injuries

A standing committee under the director general of the army medical service has been formed to investigate maxillofacial injuries. The committee includes leading dental surgeons and Sir Harold D. Gillies, whose work in the treatment of facial injuries sustained in the great war is so well known. The committee will make recommendations in regard to the provision of special facilities and equipment for these cases, the general method of treatment and the training of dental officers in the principles of preliminary treatment in the field.

Vitamin D and the Teeth

The seventeenth annual report of the Medical Research Council contains further observations by Mrs. Mellanby to prove that "the health and beauty of the mouth" are directly dependent on an adequate supply of vitamin D in the diet, and that the state of the teeth of children affords a very sensitive test as to the adequacy of the diet. Large groups of children living in institutions under similar conditions received a specific addition to the standard diet and were regularly examined, and the progress of dental decay in the permanent teeth was recorded. A striking difference was found in the rate of increase of decay between groups receiving a ration of vitamin D in the form of cod liver oil or irradiated ergosterol and the controls who received other oils. In the former group the percentage of increase was 10; in the latter group, 46. It is noteworthy that the standard diet which all the children were receiving was believed by the medical and lay authorities concerned to be perfectly adequate for normal health and growth.

The Medical Research Council and the Manufacture of Therapeutic Substances

The Medical Research Council regards it as its function not only to promote scientific discovery but also to facilitate the availability of the results in the interests of the medical profession and of the public. Much time and labor are often necessary before the yield of a new substance can be brought to the phase of large scale production. Cooperation between investigators and manufacturing firms has been promoted in various ways, of which one is the organization of the Therapeutic Trials Committee, which works in close cooperation with the Chemotherapy Committee, responsible for the experimental work on drugs and preparations submitted. Consultation with the Association of British Manufacturers has resulted in agreed conditions under which new substances may be submitted for clinical study. The council has assisted in the rapid development of the manufacturing of insulin in this country and has given assistance in the production of vitamin D, various organic extracts, and material for inoculation against distemper in dogs. On the other hand, the chief manufacturing firms are always ready to offer the results of their experience, to supply raw materials and to help in other ways.

PARIS

(From Our Regular Correspondent)

April 13, 1932.

The Dissociate Diet

In previous communications, Mr. J. J. Rouzaud and Mr. G. Soula called attention to a new dietetic method, the results of which to date they discuss in the *Presse médicale*. This method, which they term the "dissociate diet," has today many advocates in France and it has been taken up also in foreign countries. Its essential principle consists in not prescribing nitrogenous foods and carbohydrates at the same meal but at different meals. Physiologically, these two groups of foods must necessarily figure in a normal diet, but each of them sets a different digestive task, and that task is accomplished better, and with less fatigue of the organs, when they have to deal with only one type of food at a time. That, at least, is the explanation proposed by Rouzaud and Soula. According to their experience, a meal consisting solely of nitrogenous foods or solely of carbohydrates causes less congestion of the vascular apparatus of the digestive tract than a complex meal, which is, of course, easily digested and causes no trouble to a normal person. But when the digestive functions are disordered, postprandial congestion appears, thus affecting the liver and the entire nutrition. The most remarkable results have been secured, by means of this diet, in glycosuria, but always proportionately to the degree of the disorder. Rouzaud and Soula have given this treatment in 320 cases. In the first series of 109 cases, characterized by a mild glycosuria of the alimentary type, with a week's glycemia fasting, the dissociate diet dispelled the glycosuria in 87 cases, brought improvement in 18 cases, and was ineffective in 4 cases. But it suffices to give just one meal in which the proteins and the carbohydrates are mixed to cause the glycosuria to reappear. In a second category of patients affected with permanent glycosuria, with a percentage of glycemia fasting ranging from 2 to 3 Gm., the results are still good; but the effects of the diet become less marked, the higher the glycemia is. When confirmed diabetes exists, with denutrition and acidosis, one can no longer count on a cure but only an amelioration in a third of the cases. It appears that then the pancreatic insufficiency becomes the predominant note and that the usual treatment with insulin is necessary. In a general way, the method is not indicated in pancreatic diabetes. But it gives good results in diabetic patients presenting gouty, plethoric and hypertensive manifestations, in diabetes with cirrhosis, and especially in former calculus patients who have alimentary glycosuria. The same diet gives good results in various manifestations other than diabetes; for example, in arthritism associated with hepatism: migraine, asthma, obesity, flatulent dyspepsia. This diet is furthermore readily accepted by patients, as it is simple to follow. It is sufficient to prescribe a liquid or fruit, without bread, for breakfast; a lunch consisting of meat, fish, eggs, green vegetables and fruits, without bread, and with a minimal allowance of fluids, and a vegetarian dinner with bread.

Treatment of Tabetic Atrophy of the Optic Nerve

Dr. Abadie, French ophthalmologist, came forth recently from his retirement to present to the Academy of Medicine the remarkable results that he has secured for many years from his treatment for atrophy of the optic nerve, which, since Charcot, has been considered a manifestation of tabes. According to Abadie, that atrophy is caused by a continuous and progressive vasoconstriction of the central artery of the retina. This conception led him to devise a treatment that consists in applying, every other day, a subcutaneous injection of 2 mg.

of atropine and an intravenous injection of 0.01 Gm. of mercuric cyanide. All the patients to whom Abadie has applied this treatment found the progressive evolution of their atrophy checked, and all benefited from an increase in their visual acuity, the improvement being much greater if the disorder was not far advanced. He concludes that the hope is justified that, as a result of this medication rigorously applied, tabetic atrophy, heretofore incurable and the cause of much blindness, will no longer be a serious menace. In reporting these results to the academy, Abadie likewise called attention to the fact that the treatment does not begin to act until after a number of injections have been given, and that it is necessary to continue the treatment as long as one observes an improvement in visual acuity.

The National Dental Congress

The dentists of France held in Paris, from April 6 to 13, an important scientific and professional session. Several foreign stomatologists took part in the meeting: Haber and Brill of Berlin, Watry and Charlier of Brussels, Fritz Schenk of Vienna, and others, under the chairmanship of Dr. Friteau. Professor Carnot delivered an address. Several practical demonstrations and an exhibit of equipment were held in the rooms of the Grand Palais. Army pigeons from Toul carried to the soldiers of the East wise suggestions as to the utility of dental hygiene. Numerous miniature canoes, bearers of message of the same import, were thrown into the Seine from the pont Alexandre III and left to the mercy of the waves in the hope that they might serve to evangelize the Normans. Automobiles circulated along the highways, within a radius of 30 miles from Paris, throwing out leaflets to the people and putting up posters in the villages. During the whole period, termed "dental hygiene week," lessons in dental hygiene were given to all the children in the schools, by their instructors, and all the radio stations broadcast special instructions to the public.

The American Hospital at Neuilly

The board of managers of the American Hospital at Neuilly met recently to hear the financial report of its chairman, Mr. A. Kingsley Macomber, for the year 1931. Mr. Macomber stated that the year just passed had been for the hospital the most critical year since it was established. But, in spite of the critical situation, it had been possible to extend the activities of the hospital, partly through economy but more particularly as the result of a fund-raising campaign to which the public had responded generously, the gifts amounting to $300,000. The budgetary deficit for the year 1931 was more than $80,000, in spite of many retrenchments. That was due to the decrease in the number of paying patients and to the increase of patients of limited means, who received treatment free or at half rates. The chief problem at present is to increase the hospital's sources of revenue. With that object in view, the board of managers is considering the creation of specialized services, periodic medical consultations, prenatal consultations and consultations on child care, a dental clinic, a dispensary for diabetic patients, another for physical therapy, and the like. Dr. Edmund L. Gros was reelected president of the medical staff of the hospital. Drs. Thierry de Martel and George M. Converse were reelected vice presidents, and Dr. Bove was again chosen secretary.

Death of Pierre Teissier

The death of Dr. Pierre Teissier is announced. Professor Teissier had been professor of clinical medicine at the Faculté de médecine de Paris since 1911; member of the university council, and member of the Academy of Medicine since 1918. He was a favorite pupil of Potain and carried out many researches on diseases of the blood, the spleen and the heart, on tuberculosis, and particularly on the action of roentgen rays in tuberculosis. In 1927, he had served as the president of the Congress of Medicine. He was Commander of the Legion of Honor.

BERLIN

(From Our Regular Correspondent)

April 11, 1932.

The German Surgical Congress

The German Surgical Congress was held, March 30 to April 2, at the headquarters of the Deutsche Gesellschaft für Chirurgie, in Berlin. In his address of welcome, Professor Voelcker of Halle protested against the recent tendency to split off from surgery partial fields and to make special branches out of them. While it is true that there are eminent specialists in the fields of lung, brain and stomach surgery, yet such a special field can never be made the basis for training; for surgical instruction presupposes that the whole operative art be taught and practiced. He emphasized that only through universal training were great achievements in surgery possible. The hundredth anniversary of the birth of one of the founders of the Gesellschaft, Franz König, surgeon of Berlin, gave the chairman an opportunity, in his memorial speech, to support this conception by citing a conspicuous case.

The congress managed to present 140 communications and numerous demonstrations during the four days' session. The question of limiting the mental pabulum is always discussed, but no solution is ever found. As a whole, the congress offered a good survey of the present status of surgery. This session dealt more with general medical problems than with questions pertaining to operative technic. Almost all new research seeks, through perfection of diagnostic aids and through the far-reaching use of new knowledge on the constitution, to secure the greatest possible safety to the individual operation. That was seen clearly on the first day in the discussion of liver disorders, which revolved about the problem of liver function and the relation of the liver to the general economy of the organism. The papers of the surgeon and the internist (Professors Henschen of Basel and Brugsch of Halle) supplemented each other. The strong desire of the surgeons that they receive gallbladder cases in an early stage while still easily operable may be essentially furthered, through these researches.

The next topic, "The Importance of the Borderline Problems of Surgery and Internal Medicine," was discussed by Professor Rehn of Freiburg. Rehn illustrated, by a case of suppurative inflammation of the pleura and by gallbladder disorders, how necessary collaboration of the internist and the surgeon is. In such borderline cases, one cannot say that either the internist or the surgeon has jurisdiction; otherwise there would be danger that sometimes an operation would be undertaken too early and another time too late. The one-sided point of view in such conditions, on the part either of a surgeon too eager to operate or of an internist who may believe that he can render aid with medicaments or by physical agents, may be equally harmful. The surgeon and the internist must work hand in hand, on the borderline of surgery and medicine, and apply all means of modern biology to find the most favorable moment for an intervention if needed. Such a situation arises frequently if one studies carefully the delicate acid-base equilibrium. In this way, both surgeon and internist will have a common basis for their mode of treatment. This double treatment of the subject brought out the fact that the surgeon is dependent on the research methods of the internist; for, in connection with anesthesia and the operation, dangers may arise when the damaged condition of the liver is not recognized in time. A damaged liver is not infrequently the cause for the unhappy outcome of operations. Professor Kirschner of Tübingen discussed spinal anesthesia, after the Bier method. Kirschner has applied his method with success in numerous cases. The operator draws off spinal fluid and then injects air with a specially constructed syringe and, following the air, the anesthetic. The anesthetic remains between the air layer and the fluid layer, as Kirschner showed in roent-

genograms. By shifting the air and the fluid layers, the position of the anesthetic is so regulated that the portion of the body to be operated on is deprived of sensation.

On the second day, the chief topic was "Gangrene of the Extremities." Widely different causes may be responsible for the disease. By prompt treatment, amputation can be avoided in these cases. Removal of the nerves supplying the blood vessels, recommended by French authors, has not fulfilled expectations. German research has led to the discovery of so-called circulation hormones, to which possibly considerable therapeutic value attaches, although the question of their use is still a matter of debate. Their use sometimes enables one to avoid a threatened amputation. In many cases, however, amputation is the only way out.

The second speaker, the pathologist Ceelen of Bonn, began his address with a reference to Philoctetes, the story of whose gangrene is told in Sophocles tragedy. Ceelen discussed the three most important forms of gangrene: diabetic, senile and angioneurotic.

The spirited discussion that followed the papers showed that this subject is at present in the forefront of surgical interest. Here, too, was manifested a tendency to avoid mutilating operations on the extremities and to employ instead new methods of combating vascular diseases.

In the afternoon there was an inspection of the Latin Quarter and a drive about the city. The assembly hall was packed. Sauerbruch presented a paper on "Surgery of the Esophagus." He spent more time in presenting patients than in discussing the subject. A large number of men, women and children were introduced to demonstrate the surprising results of operative interventions on the esophagus, the bronchi, and the lungs. The young woman whose pericardium was opened last year because of an aneurysm that threatened her life appeared the picture of health. When the pericardium was opened, it was found unexpectedly that the aneurysm was connected with the heart by an opening, which necessitated quick action. To prevent her from bleeding to death, Sauerbruch held a finger in the opening, while his assistants sutured the heart wall.

Astonishing results were secured also in numerous other cases of suppuration, pulmonary gangrene, dilatations of the bronchi, and spasm or ulcers of the esophagus. Sauerbruch described how—frequently in several stages—the defects were repaired.

Nissen, Sauerbruch's physician-in-chief, reported his experiences in injuries of the lungs. Air, which sometimes collects in the mediastinum, is an immediate menace to life. The danger can often be promptly eliminated by puncture (aspiration).

The most impressive thing of this whole demonstration was the fact, as emphasized by Sauerbruch, that such operations on the thorax eliminate not only a local focus of disease but act, at the same time, on the general condition of the patient, and in some cases they are life saving.

Heile of Wiesbaden dealt with "Natural Therapeutic Processes." The tone of the discussion that followed showed plainly that among large groups of surgeons there is a tendency to conservative treatment. An operation is always only one of the factors to be considered, along with other therapeutic measures.

Among numerous other communications were the observations of Simon of Ludwigshafen on cancer-like tumors of the urinary bladder in aniline workers. They constitute a much feared industrial disease. It has been discovered that the irritant that causes the hyperplasia of the bladder wall is taken into the organism through ordinary respiration. By observing proper precautions in connection with respiration, the disease has been suppressed to a considerable extent. Until recently, physicians were powerless to combat these tumors.

On the last day, the congress reached a high level with its surgery of the extremities. This session proved conclusively that surgery still honors the ancient meaning of the term handicraft. Addresses on the surgery of cancer closed the session.

Läwen of Königsberg explained his treatment of chronic effusions of the knee joint, which consists in the formation of a fenestra into the joint capsule. Böhler of Vienna displayed enthusiasm in recommending that, in fractures of the vertebrae, the compressed vertebral bodies be adjusted as early as possible and the solidity of the spinal column be improved by gymnastic exercises. The psychologic factor—the belief of the patients in their recovery—is of the greatest importance. A moving picture and roentgenograms showed the good results effected in a number of persons who had suffered vertebral injuries.

Reschke of Greifswald spoke on suppuration of the bone marrow in the vicinity of the hip joint, operation on which he opposes in principle. Those who participated in the general discussion agreed with him, emphasizing that it requires more courage to resist the suggestion of an operation than it does to operate.

The statement of the chairman that the German surgeons were again taking part in the international surgical congresses was pleasing to the assembly. The hostility toward the surgeons of the Central Powers has been overcome. At the recent International Surgical Congress in Madrid, the representatives of the Deutsche Gesellschaft für Chirurgie were treated with every courtesy. Evidence of the change is the fact that Eiselsberg of Vienna was chosen president of the next International Surgical Congress.

BELGIUM

(From Our Regular Correspondent)

March 21, 1932.

Fogs in the Valley of the Meuse

In December, 1930, a thick fog spread over the valley of the Meuse between Huy and Liége for several days and caused many fatalities among the inhabitants. More than sixty persons succumbed and several hundred more were seriously discommoded. The symptoms were those of attacks of asthma, followed by a sudden cardiovascular insufficiency. Death often ensued within a few hours after the first attack. The treatment consisted of subcutaneous injections of epinephrine, which brought quick relief to many patients. Those who succumbed presented particles of soot in the alveoli of the lungs, derived from the factory chimneys of the surrounding region. Of the substances in the soot, chemical analysts incriminated only sulphurous anhydride and its products of oxidation, hydrofluoric acid, nitrous vapors, vapors of ammonia, and hydrochloric acid. The hydrofluoric acid does not appear to have been the principal factor of toxicity. Mr. Firket, in his report, expressed the view that nitrous vapors are capable of producing similar accidents to those observed. But nitrous vapors were not produced in sufficient quantity in the neighboring factories; nor were the vapors of ammonia and hydrochloric acid produced in large quantities. Sulphurous anhydride, arising from the combustion of coal, was no doubt the substance that was produced in the largest amount. Sulphurous anhydride, however, combines with water to produce sulphurous acid, and sulphuric acid is produced then by direct oxidation of sulphurous acid by the dissolved oxygen.

This explanation of the toxicity of the fog is the only one that is in complete accord with the medical, toxicologic, meteorological and chemical observations.

Experiments on Transportation of Mosquitoes in Airplanes

The question has been raised whether mosquitoes may be transported by airplanes. Experiments have been made in the Belgian Congo, along the routes from Leopoldville to Boma, Elisabethville, Coquilhatville and Stanleyville. In only four cases were mosquitoes found on the arrival of the airplane.

Mosquitoes were transported in small boxes. They were still living when the airplane had risen to about an altitude of 1,000 meters, and were dead when an altitude of from 1,700 to 2,000 meters had been reached. But these experiments must be repeated with greater precautions. Anopheles are sent regularly to England from Italy, Africa and America, 30 per cent arriving alive if the cages are well protected and proper food provided.

Unauthorized Practice of Medicine by Nurses

In order to stop the increasing number of abuses, the Belgian medical federation has again called the attention of the public authorities and of the mutual life insurance companies to the practice of medicine by nurses and visiting nurses, urging them to limit strictly the interventions of nurses to their regularly assigned duties. It has likewise sent a request to the professors in the training schools for nurses and visiting nurses that they impress on their pupils that under no circumstances have they the right to perform an act of medical aid without express authorization—applicable only to the particular case in question—of the attending physician. The Belgian medical federation has requested, in an article in the *Bulletin Officiel*, that the professors, surgeons, physicians and the authorized midwives in the hospitals, clinics and maternities seek in their operations the assistance of physicians and refrain from extending the rôle of the attending nurses and the visiting nurses.

The Brachet Memorial

The executive committee of the Albert Brachet commemoration, under the chairmanship of Professor Crismer, invited the subscribers and a number of dignitaries to convene at the Anatomic Institute to dedicate the medallion of the deceased scientist, which is the work of the sculptor De Vreese. In addition to the erection of the memorial, the funds collected gave a surplus of 100,000 francs, the interest on which will be used to create a biennial international prize in embryology, which will be awarded by the Royal Academy of Medicine of Belgium, under the name of the Brachet prize. Mr. Marcq, vice president of the administrative council of the university, thanked the organization committee for the gift of the memorial. He referred to Albert Brachet's life of sacrificing toil and his great influence over the students, which he attributed to a love of truth, justice and beauty. Albert Brachet was rector of the university for three years, which administration showed his fine qualities as an organizer and the spirit of prompt and just decision that animated him. Following the address, the guests went to the atrium of the institute, where the beautiful medallion, which represented Brachet at work, was unveiled by Mr. Crismer.

The Belgian Medical Federation

Within the Fédération médicale belge, a Comité d'études de prophylaxie sociale has been created, the purpose of which is: (*a*) to study the practical means of coordinating the various decisions of the legislative, administrative and private organizations having to do with the protection of the public health; (*b*) to present and to defend in this field the suggestions of the medical profession and to transmit them to the public authorities or other competent authorities, and (*c*) to harmonize the practice of medicine and the interests of the physician, while assuring the protection of the public health.

This committee is under the direction of an official body composed of a president, two vice presidents, a general secretary and an associate secretary, appointed by the executive committee of the Fédération médicale belge, with the approval of the members of the Comité d'études de prophylaxie.

At least one of the five members of the body of officers will be a member of the executive committee of the Fédération médicale belge. Honorary members may be appointed at the suggestion of the Comité d'études de prophylaxie sociale. The Comité d'études de prophylaxie sociale will be composed of regular members and of associate members. Only the former have the voting privilege. All the members of the comité are approved by the executive committee of the Fédération médicales belge at the suggestion of the officers of the Bureau d'études de prophylaxie sociale. The members are physicians delegated by scientific societies, by official or private organizations engaged in medicosocial activities. The isolated physicians will be represented by the delegates of the Fédération médicale belge. All the members of the comité must belong to the Fédération médicale belge. The body of officers has, however, the right to engage any competent person to act as consultant with reference to the work of the committee. The studies of the Comité d'études de prophylaxie sociale are transmitted by the body of officers to the executive committee of the Fédération médicale belge, which may submit them to the general assembly or which may decide what disposition to make of them and notify the body of officers of the Comité d'études de prophylaxie sociale of its conclusions.

Gustave Dryepondt, an Example of Civic Courage

The *Scalpel* of Jan. 9, 1932, contains an appreciation of Gustave Dryepondt, a beautiful and noble figure in the field of medicine that has passed from the scene. More than forty years ago, he braved with calmness the dangers of Africa, which then was so inhospitable. Today he has fallen, suddenly stricken in the midst of his activities. Dryepondt was a great patriot, a great colonizer and a man gifted with the noblest heart qualities. In 1890, on leaving the university, the young army physician, responding to an appeal of Leopold II, left his native land for the conquest of the "dark continent"—not sword in hand but as a disciple of Aesculapius, bringing to the unhappy people of central Africa the blessings of science. Dryepondt was a natural pioneer and trail blazer, as is shown by his long colonial career. At a time when life in Africa lacked the security of today, he emigrated with his family, giving thus to his compatriots a fine example of civic courage. He was the founder of the Société belge d'études coloniales, was a member of the Institut international colonial, and after the war was appointed colonial counselor by the king. After emerging from the great conflict, he organized the Journées coloniales, which contributed greatly to the interest in the colonies, in Belgium.

BUENOS AIRES

(From Our Regular Correspondent)

Feb. 28, 1932.

A New Medical Curriculum Adopted

The Faculty of Medicine of the University of Buenos Aires adopted a new medical curriculum and by-laws, which became effective March 16. The regulations express the advisability to restrict the number of students in the first and second years of medicine, as much and as soon as possible, so that only those well fitted may be selected. At present the first and second years are made up by groups of 600 or 800 students, not all of them well fitted, as proved by the fact that during the entire period of medical studies some students fail even ten or more times in a given subject. Some of them have been attending the school for the past twelve or fifteen years and have not as yet graduated. The examinations for admission to the study of medicine imposed on candidates have consisted heretofore of a written test on biology and zoology, three oral tests (in different days) in botany, physics and chemistry, and a test by which the student should prove his ability to translate from French. About 40 per cent of the candidates pass the examination. According to the new regulations, the examination for admission will consist of the same tests included in the examinations as heretofore, with the exception that there will be two oral tests instead of three, and in the translation test the student should prove his ability to translate from two foreign languages (either English and German or French and Italian). Henceforth, the number of years of medical study, which is now six, will be increased to seven, as it was in 1918. From

the records of the school, it has been found that only 30 per cent of the students are able to finish the entire course of medical studies in six years; 15 per cent finish them in seven years and 55 per cent attend the school more than seven years in order to graduate. The new curriculum annuls semestral periods, each of which, heretofore, has had practically three and a half months of study. The periods will consist of the entire year of study. The July promotion examinations also are annulled, only the December and March examinations being continued in effect. The studies for the entire year will represent a complete unit. The program will be as follows: first year, histology, embryology and anatomy; second year, topographic and descriptive anatomy, physiology, biochemistry and biophysics; third year, physiology and biochemistry, pathologic anatomy, microbiology and parasitology; fourth year, symptomatology (classes every morning), surgery, pharmacology and therapeutics, toxicology, roentgenology and physical therapy; fifth year, medical and surgical pathology, otorhinolaryngology, ophthalmology and dermatosyphilography; sixth year, clinical work on gynecologic, urologic, psychiatric, neurologic, infectious, surgical and clinical cases; seventh year, clinical work on pediatric, obstetric, surgical, and clinical cases, orthopedics, legal medicine and hygiene. During the first three years the work of the student should cover attendance and work done in the amphitheater and laboratories; in the fourth year he must attend the clinics and the courses of symptomatology, and during the last three years he must devote regularly a certain number of hours to practical work in the hospital, either as an extern or as an intern.

The Problem of Care of the Insane

Dr. G. Bosch, director of the Hospicio de las Mercedes of Buenos Aires, recently published an article embodying projects for the care of the insane. The census of 1869 showed that there were 4.3 mental defectives per thousand of population. The census of 1895 showed that in the entire group of mental defectives the rate among foreigners was twice that among Argentine persons. At present there are about 14,000 insane patients in the asylums of Argentina; that is, 1.26 per thousand of the population. These figures do not include, of course, psychiatric patients who receive attendance in their own homes, and they number perhaps still more than those in the asylums. There are no reliable statistics on the subject, but it may be estimated, on a reasonable basis, that the number of insane patients in Argentina varies between 24,000 and 43,000, which should be distributed among the seven large hospitals and ten sanatoriums that constitute the entire number of psychiatric centers in Argentina. The members of the Comisión de Asilos y Hospitales Regionales of Argentina are acting to provide the several regions of the country with the necessary psychiatric institutions. A large neuropsychiatric colony with an asylum, in which psychiatric patients of the northern region of Argentina will be taken care of, is under construction on the ranch of Linares, Lerma, province of Salta, where the board of directors of the commission recently acquired a large tract for that purpose. Plans are being made to open psychiatric consultation centers as well as to increase the number of hospitals and dispensaries for the care of patients with mental disease in every province of Argentina.

Personal Items

Drs. M. Susini and R. Vaccarezza have been appointed president and secretary, respectively, of the National Department of Hygiene of Buenos Aires.

Dr. A. Pirovano has been appointed director of Public Health of Argentina.

Deaths

Dr. A. Gandolfo, professor emeritus and honorary academician and former regular professor of surgical clinics at the Faculty of Medicine of the University of Buenos Aires, has died.

Marriages

TILDEN IVER MOE, Assistant Surgeon, Lieutenant (j. g.), U. S. Navy, to Miss Dorothy Mae White of Springfield, Ill., in Washington, D. C., May 11.

JOHN FRAMPTON WYMAN, Aiken, S. C., to Miss Bonnie Anne Atkinson of Chicago, May 18.

ARTHUR NELSON BERRY, Boston, to Miss Dorothea Marie Keough, recently.

ROBERT H. RATHBONE to Miss Rowena Thom, both of Los Angeles, April 6.

Deaths

James Walter Heustis, Dubuque, Iowa; Harvard University Medical School, Boston, 1884; past president of the Dubuque County Medical Society; served during the World War; formerly on the staffs of the Episcopal Eye and Ear Hospital and the Freedmen's Hospital, Washington, D. C., the Los Angeles County Hospital and the White Memorial Hospital, Los Angeles; aged 69; died, April 9, of coronary thrombosis.

Bert Leander Eiker ✠ Leon, Iowa; Rush Medical College, Chicago, 1896; member of the House of Delegates of the American Medical Association, 1922, 1924 and 1928; fellow of the American College of Surgeons; president of the Iowa State Medical Society; formerly member of the state board of health and state legislature; aged 60; died, May 6, in a hospital at Sioux City, of pneumonia.

Percy Bernard Davidson ✠ Boston; Johns Hopkins University School of Medicine, Baltimore, 1921; member of the New England Roentgen Ray Society; formerly instructor of pathology, University of Wisconsin Medical School, Madison; on the staff of the Beth Israel Hospital; aged 36; died, April 29, in the Boston City Hospital, following an operation.

George W. McCoy ✠ Los Angeles; Miami Medical College, Cincinnati, 1904; member of the Pacific Coast Oto-Ophthalmological Society and fellow of the American College of Surgeons; senior ophthalmic surgeon to the Los Angeles County Hospital and on the senior surgical staff of the California Hospital; aged 61; died, April 21.

Stephen Olin Watkins, Minneapolis; University of the City of New York Medical Department, 1880; formerly superintendent of the Wyoming Tuberculosis Sanatorium, Basin; aged 81; died, April 11, at the Minnesota Masonic Home, of arteriosclerosis, cerebral hemorrhage and chronic myocarditis.

S. Anson Hill, San Francisco; Hahnemann Medical College and Hospital of Philadelphia, 1910; formerly clinical professor of applied homeopathic therapy, University of California Medical School; on the staff of the Southern Pacific Hospital; aged 44; died, April 10, of chronic interstitial nephritis.

Frank Joseph Powers ✠ Baltimore; Baltimore University School of Medicine, 1898; served during the World War; medical superintendent of the Baltimore City Jail; aged 59; died, April 29, in the Mount Alto Hospital, Washington, D. C., of brain tumor.

Joseph Harry Oppenheim, New York; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1930; aged 30; intern, Beth Israel Hospital, where he died, March 7, of coronary thrombosis and diabetes mellitus.

Ashley W. Ogle, Sevierville, Tenn.; University of the South Medical Department, Sewanee, 1903; member of the Tennessee State Medical Association; past president of the Sevier County Medical Society; aged 51; died, March 31, of pneumonia.

Jacob Long Sowers ✠ Lexington, N. C.; University of Maryland School of Medicine, Baltimore, 1921; past president of the Davidson County Medical Society; for two years county coroner; aged 38; was instantly killed, May 1, in an automobile collision.

Edward Birtrum Cooper, Sunbury, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1893; served during the World War; for many years on the staff of the Mary M. Packer Hospital; aged 61; died, March 17.

J. N. Blume ✠ Arcadia, La.; Memphis (Tenn.) Hospital Medical College, 1903; aged 58; died, April 27, in a hospital at Shreveport, of injuries received when the automobile in which he was driving was struck by a train.

Clarence Ray Essex, Galesburg, Ill.; St. Louis College of Physicians and Surgeons, 1905; member of the Illinois State Medical Society; aged 50; on the staff of St. Mary's Hospital, where he died, April 22, of heart disease.

Frank Pattison Werner ✠ Reading, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1916; served during the World War; on the staff of the Reading Hospital; aged 41; died, April 4, of appendicitis.

W. J. Houston, Jr., Decatur, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1899; aged 67; died, April 15, of acute infectious cholangeitis with subhepatic abscess and complete common duct obstruction.

Harry Judge Craycroft ✠ Fresno, Calif.; Cooper Medical College, San Francisco, 1904; fellow of the American College of Surgeons; on the staff of the Fresno County Hospital; aged 54; died, March 18, of influenza.

Menno H. Hostetler, Wichita, Kan.; Starling-Ohio Medical College, Columbus, 1911; member of the Kansas Medical Society; county health officer; aged 50; died, April 10, in a hotel at Topeka, of angina pectoris.

John Vincent O'Connor, St. Paul; University of Minnesota College of Medicine and Surgery, Minneapolis, 1895; aged 64; died, April 5, in St. Joseph's Hospital, of encephalomalacia and arteriosclerosis.

Omar Joseph Massey, Wheeling, W. Va.; Ohio State University College of Medicine, Columbus, 1931; intern, Wheeling Hospital; aged 38; died, April 20, of injuries received in an automobile accident.

Louis J. Wolfort, St. Louis; Missouri Medical College, St. Louis, 1895; member of the Missouri State Medical Association; aged 59; died, April 18, in the Josephine Hospital, of streptococcus cellulitis.

John Walter Lambert, Tangipahoa, La.; Tulane University of Louisiana School of Medicine, New Orleans, 1887; for many years mayor of Tangipahoa; aged 70; died, March 28, of uremia and nephritis.

Abraham Blumenfeld, Boston; Tufts College Medical School, Boston, 1929; member of the Massachusetts Medical Society; aged 26; died, January 27, in the Beth Israel Hospital, of renal calculus.

James Ralph Higgins ✠ Gillespie, Ill.; St. Louis University School of Medicine, 1913; served during the World War; aged 45; died, April 18, at the St. Francis Hospital, Litchfield, of heart disease.

James McIlwain, Okawville, Ill.; University of the City of New York Medical Department, 1868; member of the Illinois State Medical Society; aged 88; died, April 20, of influenza and arteriosclerosis.

James W. Beck, Des Moines, Iowa; State University of Iowa College of Medicine, Iowa City, 1881; formerly coroner of Polk County; aged 74; died, April 24, of coronary thrombosis and arteriosclerosis.

Edward Ralph Cotham ✠ Monticello, Ark.; Jefferson Medical College of Philadelphia, 1903; served during the World War; aged 51; died, April 30, of arteriosclerosis and coronary occlusion.

Peter Thomas Burns ✠ Chicago; Northwestern University Medical School, Chicago, 1891; for many years assistant professor of anatomy at his alma mater; aged 67; died, May 10, of myocarditis.

William Oscar Spencer, Multnomah, Ore.; Cooper Medical College, San Francisco, 1897; member of the Oregon State Medical Society; aged 65; died, February 25, of progressive muscular atrophy.

Herbert Lee McKown, Tunkhannock, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1894; member of the Medical Society of the State of Pennsylvania; aged 61; died, February 4.

Albert H. Hattan, Peru, Ill.; American Medical College, St. Louis, 1877; Chicago Homeopathic Medical College, 1893; aged 74; died, April 26, in Cadiz, Ohio, of heart disease and arteriosclerosis.

Albert Leonard Miller ✠ Marysville, Calif.; Rush Medical College, Chicago, 1896; aged 60; on the staff of the Rideout Memorial Hospital, where he died, March 22, of coronary thrombosis.

William J. J. Paris, Rosiclare, Ill.; University of Tennessee Medical Department, Nashville, 1882; member of the Illinois State Medical Society; aged 78; died, March 21, of pneumonia.

Allen Lowery, Blackwell, Okla.; University of Louisville (Ky.) School of Medicine, 1891; aged 71; died, April 24, of cerebral hemorrhage, following an operation for intestinal obstruction.

Clarence Eugene Applegate, Long Beach, Calif.; Rush Medical College, Chicago, 1927; aged 33; died in April at a local hospital of a skull fracture received in an automobile accident.

John McK. Wyatt, Madison, Wis.; University of Nashville (Tenn.) Medical Department, 1878; aged 83; died, April 11, in the Madison General Hospital, of bronchopneumonia.

James McPherson Templeton ✠ Cary, N. C.; Baltimore Medical College, 1882; served during the World War; aged 76; died, May 1, in a hospital at Raleigh, of heart disease.

Neil Kittredge Forhan, Presque Isle, Maine; Tufts College Medical School, Boston, 1912; aged 45; died, January 17, in the Boston City Hospital, of dilatation of the heart.

Leslie Lenton Blair, Denver, Colo.; Atlanta (Ga.) College of Physicians and Surgeons, 1911; served during the World War; aged 43; died, April 13, of miliary tuberculosis.

Benjamin Lee Jeter, Millington, Tenn.; Memphis Hospital Medical College, 1893; aged 59; died, April 23, in the Baptist Hospital, Memphis, of cerebral hemorrhage.

Richard Fricke, Calistoga, Calif.; Baltimore University School of Medicine, 1891; aged 75; died, March 8, in San Francisco, of diabetes mellitus and arteriosclerosis.

Charles Smith Bumstead, New York; Albany Medical College, 1889; member of the Medical Society of the State of New York; aged 72; died, April 4, of myocarditis.

Edward Newby Wheeler, Decatur, Ill.; Rush Medical College, Chicago, 1878; Civil War veteran; aged 86; died, March 10, in St. Mary's Hospital, of pneumonia.

George Henry Sherman ✠ Detroit; Chicago Medical College, 1883; aged 74; died, April 19, in a hospital at Melbourne, Fla., following an operation for appendicitis.

Domenico Saladino ✠ Brooklyn; Eclectic Medical College of the City of New York, 1887; aged 69; died, April 23, of lobar pneumonia and chronic myocarditis.

Mary D. Gibbons, Oak Park, Ill.; Hahnemann Medical College and Hospital, Chicago, 1888; aged 81; died, April 21, of coronary sclerosis and nephrolithiasis.

Michael Lewis Landman ✠ New York; Miami Medical College, Cincinnati, 1905; aged 48; died, April 15, of chronic interstitial nephritis and arteriosclerosis.

Maurice W. Deming, Newark, Ohio; Medico-Chirurgical College of Philadelphia, 1899; aged 69; died, April 21, of cerebral hemorrhage and influenza.

Wesley Wilson Duncan, Sorento, Ill.; American Medical College, St. Louis, 1878; Civil War veteran; aged 91; died, April 12, of acute bronchitis.

Augustus Alison Gerlach ✠ Oakland, Calif.; University of California Medical School, San Francisco, 1929; aged 33; died, March 15, of influenza.

Charles Travis Drennen ✠ Hot Springs National Park, Ark.; Rush Medical College, Chicago, 1885; aged 68; died, April 26, of heart disease.

Charles Bolton Brock, Richmond, Va.; Medical College of Virginia, Richmond, 1894; aged 61; died, April 11, of a self-inflicted bullet wound.

Oscar William Stark, Cincinnati; College of Physicians and Surgeons in the City of New York, 1887; aged 67; died, April 19, of heart disease.

Marion Hendrickson, Johnston City, Ill.; St. Louis College of Physicians and Surgeons, 1897; aged 61; died suddenly, April 25, of heart disease.

La Rose Rancour ✠ New York; Albany (N. Y.) Medical College, 1892; aged 63; died suddenly, February 12, of a self inflicted bullet wound.

David S. Ramseur, Blacksburg, S. C.; Medical College of South Carolina, Charleston, 1879; aged 80; died, April 14, of cerebral hemorrhage.

Frithjof A. Nordbye, Camrose, Alta., Canada; McGill University Faculty of Medicine, Montreal, Que., 1908; aged 51; died in March.

Joseph E. Huffman, Santa Rosa, Calif.; Dunham Medical College, Chicago, 1897; aged 79; died, March 23, of hemiplegia and pneumonia.

Norman A. Thomas, Oil City, Pa.; Jefferson Medical College of Philadelphia, 1896; aged 63; died, April 11, of pneumonia.

Bureau of Investigation

AN APHRODISIAC FRAUD

Robert L. Teycer Mail-Order Fake Debarred from the Mails

On April 2, 1932, the Postmaster General, acting on the recommendation of Judge Horace J. Donnelly, Solicitor for the Post Office Department, issued a fraud order against Dr. Teycer, Dr. B. L. Teycer, Progressive Chemical Association, Teycer Mail Order Company, all of Chicago, and their officers and agents as such. Judge Donnelly in his memorandum to the Postmaster General reported, in effect, that the facts were as follows:

Robert L. Teycer, who is not a physician, had advertised in the matrimonial magazine, *King Cupid*, as follows:

> EXTRA DOUBLE STRENGTH VIGORENE
>
> Amazing Vim, Vigor, Staying power, Endurance. Master Medicine. Stimulates spinal genital center, recharges system at same time. No disappointments. $1.50. 2 boxes $2.50. Dr. Teycer, Box 1275KC. Chicago. Circular free

Those that answered the advertisement received circular matter from Teycer, in which it was stated that "after years of research work, chemical and physical tests, Dr. B. L. Teycer, Ph.C., one of the world's greatest chemists, has discovered one of the main causes of lost nature, lost manhood, poor endurance and staying power, and low sexual power." There was much more of the same sort. The alleged aphrodisiac which Robert L. Teycer sold had, according to the federal report, the following formula:

Reduced Iron	½ grain (or ¼ grain)
Quinine Sulphate	¼ grain
Pulv. Capsicum	1/20 grain
Strychnine Sulphate	1/30 grain
Arsenic Trioxide	1/60 grain
Formin	1 grain
Buchu	1 grain
Zinc Phosphide	1/10 grain
Aloin	¼ grain
Ergotin (Bonjean)	¼ grain
Metagen ABC VITAMINS (Parke, Davis & Co.)	3 grains

The government brought out at the hearing that the claims made for Vigorene were false and fraudulent and that the stuff would not restore "lost manhood" to impotent old men, as represented. It was brought out, too, that the preparation did not contain significant quantities of the vitamins A, B or C, while some of the various drugs included in the preparation might easily have a deleterious effect on certain persons by causing or aggravating digestive disorders.

Teycer, according to the report, formerly operated a small drug store in Chicago, which was recently taken over by creditors. Instead of having "spent thousand of dollars making physical and chemical tests," as claimed, it was brought out at the hearing that Teycer simply selected some drugs which he found listed in a manual and incorporated them in the formula. As a result, Judge Donnelly declared that the scheme was one for obtaining money through the mails by means of false and fraudulent pretenses and recommended the issuance of a fraud order.

MISBRANDED "PATENT MEDICINES"

Abstracts of Notices of Judgment Issued by the Food and Drug Administration of the United States Department of Agriculture

[*Editorial Note.*—The Food and Drug Administration of the U. S. Department of Agriculture publishes, in bulletins issued at frequent intervals, reports on "patent medicines" whose sale has been found to violate the national Food and Drugs Act. Unfortunately, this information is buried, so far as the general public is concerned. For that reason, THE JOURNAL has, ever since the Food and Drugs Act has been in existence, published abstracts of these notices and, later, reprinted the material in book and pamphlet form, for the information of the profession and the public. In the past, these abstracts have been sufficiently detailed to occupy an amount of space in THE JOURNAL that is out of proportion to their importance. Commencing with the present group, we are presenting such abstracts in the briefest possible form. First is given the name of the product with the name of the manufacturer, shipper, or consigner. Following this is the composition, as shown by the analyses made by the federal chemists; then comes a brief statement of the type of "patent medicine," unless the name of the product is self-explanatory; finally, there is given the reason for the charge of misbranding: Fraudulent therapeutic claims or false claims for composition or origin. It is to be borne in mind that the dates of issuance of the Notices of Judgment here abstracted may be several months later than the date of seizure of the product.]

Pyo-Rem.—Pyo-Rem Chemical Company, Inc., Los Angeles, Cal. Composition: Zinc chloride, potassium chlorate, with traces of boric acid, chloroform, and formaldehyde, colored red. For pyorrhea, etc. Fraudulent therapeutic claims.—[*N. J. 17602; April, 1931.*]

Ware's Black Powder.—W. S. Kirby Company, Dallas, Texas. Composition: Charcoal, bismuth subsalicylate and an iron compound. For stomach and bowel trouble. Fraudulent therapeutic claims.—[*N. J. 17608; April, 1931.*]

Fansler's Kidney, Bladder and Rheumatism Medicine.—Fansler Manufacturing Company, Marion, Ind. Composition: Copaiba and cubeb oleoresins, sandalwood oil, potassium chloride, potassium acetate, extracts of plant drugs, sugar, and 11.5 per cent alcohol. Alcohol content wrongly declared; fraudulent therapeutic claims.—[*N. J. 17612; April, 1931.*]

Merle's Epsom Salt Tablets.—Devore Manufacturing Company, Columbus, Ohio. Composition: Phenolphthalein, podophyllum, aloes, and epsom salt. False claims for composition.—[*N. J. 17623; April, 1931.*]

Bronchuline.—International Laboratories, Rochester, N. Y. Composition: An emulsion containing mineral oil, sodium and calcium glycerophosphates, and creosote flavored with wintergreen. A "cough cure." Fraudulent therapeutic claims.—[*N. J. 17624; April, 1931.*]

Tonic Force.—Zarpas Laboratories, Monessen, Pa. Composition: Sulphur, ground plant material, including aloes, iron oxide, cinchona alkaloids, a trace of arsenic, ginger, and malt syrup. Alleged blood purifier. Fraudulent therapeutic claims.—[*N. J. 17626; April, 1931.*]

Mal-A-Tol.—First Texas Chemical Manufacturing Company, Dallas, Texas. Composition: Quinine sulphate, drug extracts including a laxative, sodium benzoate, and arsenic and iron compounds. For chills, fever and malaria. Fraudulent therapeutic claims.—[*N. J. 17628; April, 1931.*]

Alertox.—Alertox, Inc., Atlanta, Ga. Composition: Epsom salt, sodium phosphate, and water. General cure-all. Fraudulent therapeutic claims.—[*N. J. 17629; April, 1931.*]

Vapo Ply.—Hoyt Bros., Inc., Newark, N. J. Composition: An ointment with a petrolatum base, containing oils of camphor, menthol, eucalyptol, thymol and wintergreen. An "asthma cure." Fraudulent therapeutic claims.—[*N. J. 17630; April, 1931.*]

Hoyt's Cold Tablets.—Hoyt Bros., Inc., Newark, N. J. Composition: Acetanilid, quinine sulphate, aloin, red pepper and camphor. Fraudulent therapeutic claims.—[*N. J. 17630; April, 1931.*]

Hoyt's Catarrhal Jelly.—Hoyt Bros., Inc., Newark, N. J. Composition: Petrolatum, camphor, menthol and eucalyptus oil. Fraudulent therapeutic claims.—[*N. J. 17630; April, 1931.*]

Fenner's St. Vitus Dance Medicine.—S. C. Wells and Company, LeRoy, N. Y. Composition: Compounds of arsenic and potassium, with extracts of plant drugs, volatile oils, and alcohol. Fraudulent therapeutic claims.—[*N. J. 17631; April, 1931.*]

Potaska.—F. M. Pease and Son, Lee, Mass. Composition: An ammonium compound, guaiac resin, potassium chlorate, lemon and lavender oils, sugar, alcohol, and water. For sore throat, bronchitis, etc. Fraudulent therapeutic claims.—[*N. J. 17632; April, 1931.*]

Inhalex.—Li Roth Research Laboratories, Inc., Philadelphia. Composition: Formaldehyde, menthol, alcohol and water. For throat affections, etc. Fraudulent therapeutic claims.—[*N. J. 17633; April, 1931.*]

Lung Saver.—Lung Saver Company, Philadelphia. Composition: Extracts of plant drugs, including licorice, with chloroform, sugar and water. Fraudulent therapeutic claims.—[*N. J. 17634; April, 1931.*]

Ointrex.—Rex Company, Kansas City, Mo. Composition: A petrolatum ointment containing origanum oil, camphor, menthol and wintergreen. For influenza, etc. Fraudulent therapeutic claims.—[*N. J. 17635; April, 1931.*]

No Fal.—Western Barber Supply Company, Tulsa, Okla. Composition: Phenolic compounds, rosin, alkali and water. For growing hair and healing eczema. Fraudulent therapeutic claims.—[*N. J. 17637; April, 1931.*]

Cold and La Grippe Tablets.—Hance Bros. and White, Inc., Philadelphia. Composition: Cinchona alkaloids and aloin. Fraudulent therapeutic claims.—[*N. J. 17641; April, 1931.*]

Thorson's Soap Lake Salts.—Thorson's Soap Lake Products Company, Soap Lake, Wash. Composition: Common salt, washing soda and glauber's salt. Cure-all. Fraudulent therapeutic claims.—[*N. J. 17643; April, 1931.*]

S-T-S Little Wonder Suppositories.—Esbencott Laboratories, East Portland, Oregon. Composition: Boric acid, tannin, zinc phenolsulphonate and a trace of wintergreen. For leucorrhea and vaginal infections. Fraudulent therapeutic claims.—[*N. J. 17646; April, 1931.*]

Vaginal Antiseptic Capsules.—Grape Capsule Company, Inc., Allentown, Pa. Composition: Eucalyptol and guaiacol dissolved in castor oil. Not antiseptic. Fraudulent therapeutic claims.—[*N. J. 17647; April, 1931.*]

Vogue Antiseptic Powder.—Muir Company, Grand Rapids, Mich. Composition: Potassium alum, sodium borate, zinc sulphate, salicylic acid, and small amounts of carbolic acid, thymol and eucalyptol. Not antiseptic in the dilutions recommended. Fraudulent therapeutic claims.—[*N. J. 17648; April, 1931.*]

Correspondence

"PHYSIOLOGIC DEATH AND ARTIFICIAL RESPIRATION"

To the Editor:—The editorial comment on this subject (THE JOURNAL, April 23) suggests a question and a note of information:

Is it possible for a patient to be resuscitated (after the heart has definitely stopped) by means of artificial respiration?

In the absence of specific cardiac therapy, such as intracardiac epinephrine, has any evidence ever been adduced to indicate that a heart which has actually stopped will once more take up its physiologic function? Was it not meant, in this reference, when the heart *apparently* ceases to function? I gather that this must be so, because farther along you refer to physiologic death having occurred thirty minutes before the heart stopped beating.

The point I wish to make is that in so-called physiologic death we may consider that the heart does continue to beat, even though this action is not audible or palpable; and that when the heart does cease to beat, actual death takes place, at once.

So much for the question. The second part of the editorial comment deals with the expert administration of artificial respiration by laymen. It is well known that the technic available to such personnel is altogether limited to the application of the Schäfer prone pressure method with or without the use of an inhalator, making available oxygen and carbon dioxide by inhalation. The editorial comment continues to elaborate on the efficiency of this technic, failing, first of all, to designate the degree of asphyxia in which such methods may prove useful, these cases being practically limited to the semiconscious, partially asphyxiated patient. No mention whatever is made of the rational and accepted methods whereby the physician may complement and in many cases entirely supplant the efforts of such lay personnel. I refer directly to technic which I have repeatedly described and which is gaining in popularity, as it becomes known and available to the physician. This consists of exposure of the airway by a pocket flashlight laryngoscope, removal of foreign matter, such as blood, vomitus and sea water, from the oropharyngotracheobronchial airway, and the introduction of oxygen and carbon dioxide directly into the trachea, under direct vision and under a measured pressure. This technic is the only possible method of resuscitating the asphyxiated, relaxed, apneic patient whose circulation has failed or is no longer perceptible. It is the only technic by which immediate oxygenation, central carbon dioxide stimulation, and stimulation by the Herring-Breuer reflex may be accomplished.

The condition of the patient to be treated presents a field which is so free from resistance through the absence of muscle tone and reflexes that the necessary instrumentation is entirely nontraumatic. I believe, therefore, that emphasis should be placed on the duties incumbent on the physician in the treatment of those dying from asphyxia, instead of turning over this vital field of medicine to the care of any lay group that may be sufficiently interested to deal with it.

P. J. FLAGG, M.D., New York.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

OBESITY OF GLANDULAR ORIGIN

To the Editor:—I have under my care a woman, aged 22, suffering from amenorrhea. She appeared normal in every way, puberty occurring at 14, until she was about 16 years of age, when she began to develop rapidly, was 5 feet 10 inches (178 cm.) tall and weighed 200 pounds (90 Kg.). In the past two years she has not gained in height but weighs 260 pounds (118 Kg.). Her menses were normal until one year ago, when the amount gradually became less but the periods regular. Six months ago there was no flow, and menstruation has occurred only once since, and then it was scanty. She has a ravenous appetite and a craving for food. An adenoma of the thyroid developed following the taking of "Marmola" tablets two years ago. I have had her on mixed gland treatment now for two and one-half months without results. Please suggest treatment. Please omit name. M.D., Canada.

ANSWER.—The amenorrhea and obesity in this case are undoubtedly due to a disturbance in one or more glands of internal secretion. The gland most likely responsible here is the pituitary and the patient has the condition known as the adipogenital dystrophy of Fröhlich. This disease is due to hypopituitarism, and the chief clinical signs are adiposity and hypoplasia of the genitalia. The latter is the cause of the amenorrhea characteristic of these cases. It was formerly held by some authorities that obesity produced amenorrhea, whereas others maintained that the reverse was true. It is now known that both the obesity and the amenorrhea are due to diminished function of the hypophyseal gland. This has been proved experimentally in animals by partial removal of the hypophysis.

Not infrequently the thyroid gland is responsible for amenorrhea, and this may occur either with hyperthyroidism or with hypothyroidism. On the other hand, in both of these abnormal conditions the menstrual flow may be normal in amount or even increased. Generally speaking, amenorrhea is more frequently associated with hyperthyroidism than with hypothyroidism.

The patient should have a complete physical examination, including at least one basal metabolism test. Because of the adenoma of the thyroid which developed after the taking of thyroid extract (each Marmola tablet contains one-half grain of thyroid), great caution should be used in the administration of more thyroid, Compound Solution of Iodine U. S. P. (Lugol's solution) or other specific thyroid therapy. Because of the most

likely hypofunction of the pituitary gland, large doses of extract of the anterior lobe of the pituitary may be tried hypodermically. N. N. R., 1931, page 309, states that oral administration has not been found of value.

ACQUIRED PROGRESSIVE KINKING OF THE HAIR

To the Editor:—A robust unmarried man, aged 34, until ten years ago had a fine, thick head of brown hair. He had severe dandruff, however, and it formed in plaques, probably psoriasis, so that on one occasion while combing he tore off a plaque with the result that he drew blood. A scab formed, this in turn was torn off, and the process was repeated until a patch as big as a 25 cent piece became denuded of hair. He consulted advice with the result that the abrasion healed and the bald area, which was smooth and depressed, shortly grew new hair, which was coarse, black and brittle. He now has at the site of this sore a bump in his scalp over which the scalp is freely movable. The process nevertheless has extended to the entire scalp, so that the hair is black and stiff and wirelike, especially in the parietal areas. The individual hair is no longer a cylinder but is flattened in one diameter and is somewhat like a blade of grass. The hair is kinky, although there are no nodules, as in monilethrix or trichorrhexis nodosa. The hair appears as though it came through its follicle in a special tortuous manner. The hair pulls out easily and painlessly, and the erupted end instead of having the usual normal small round firm whitish nodule has a black glistening sticky soft bead, which can be readily detached from the shaft. At present the scalp is extremely clean and there is no seborrhea or scaly dermatitis. However, many strands of hair are showing fine tapering of their extremities so that I fear alopecia may ensue, as it undoubtedly will unless the process may be recognized and treated. The rest of the body hair is normal. There is no grayness of the hair. The bump on the head is apparently deep to the scalp and beneath the fronto-occipital fascia. Kindly omit name.

M.D., Michigan.

ANSWER.—This case seems to belong to a group recently described for the first time by Wise and Sulzberger as acquired progressive kinking of the scalp hair" (*Arch. Dermat. & Syph.* **25**:99 [Jan.] 1932). The patches of dermatitis and consequent abrasions may have been part of the disease, though the authors mentioned had no such history in their cases, or they may have been coincident. The extent of the involvement of the scalp is greater than in their cases, and there are no nodes on the hair shaft. The soft sticky root ends are also different than they found. There was no lasting alopecia in their cases. They consider the condition a form of late developing nevus. Naturally they thought of no treatment. A description of this unusual case may be sent to Dr. Fred Wise, 200 West Fifty-Ninth Street, New York. If the patient insists on treatment, the ordinary stimulating measures will surely do him no harm and may be beneficial. Massage, vigorous brushing and an ointment of 3 per cent salicylic acid and 5 per cent sulphur in ointment of rose water may be used.

HAY FEVER IN CENTRAL ILLINOIS

To the Editor:—A woman, aged 44, has had a valvular heart lesion, since the age of 5, which has always compensated but has restricted physical exertion all her life. Her general health has always been excellent except for an intense hay fever reaction each year. She has always lived in central Illinois. She is 15 pounds (6.8 Kg.) overweight. All food protein skin tests are negative and so also are the miscellaneous protein tests, such as cat hair, chicken feathers and cattle dander. The ragweed pollens rubbed into a skin abrasion cause a tremendous wheal, an unusually severe reaction most marked with false ragweed but unusually large also to the western and common variety. The following reactions were barely positive: cocklebur, marsh elder, sage brush, mountain cedar, sweet vernal grass, mugwort and wormwood. The patient has been treated three different seasons with hay fever serum; after each hypodermic injection she reports an intense local reaction involving the arm and from the shoulder to the mid forearm, with a great deal of discomfort. She has received no benefit from her serum treatments; rather an exaggeration of her symptoms has resulted, as the onset was earlier and the duration greater in the years when she had the serum than when she had no treatment. Please omit name.

M.D., Illinois.

ANSWER.—The valvular heart lesion is compensated and can therefore be left out of consideration, except that its presence calls for the best possible treatment in order to avoid the severe hay fever reaction which comes each year and which may strain the heart's action. The query does not state just when the hay fever comes on. In central Illinois there are two main seasons: 1. The grass season, due to June grass, timothy, orchard grass and redtop, and beginning about the middle of May and going through June and July. The patient should be tested for these four and, if positive, and if she has symptoms during this period, she should be given injections of a mixture of these four pollen extracts. 2. The weed season, due to the ragweeds, usually short and giant, beginning about August 10 or 15 and going through September usually to the first frost. Assuming that this patient has symptoms in this period, she should be given injections of a mixture of extracts of the short and giant ragweeds (equal parts).

The patient is evidently one of these extremely sensitive persons who must be started with a dilute solution early, and the dosage must be increased slowly. The treatment might begin with 0.02 cc. of a 1:100,000 dilution of the pollen extract (dilutions can be made with sterile physiologic solution of sodium chloride and will keep fairly well if kept on ice). Then each injection may be increased about 50 per cent; in this way one can work up the dosage through 1:10,000; 1:1,100 and finally to 1:100 dilutions. If there is a general reaction, which occurs not infrequently, epinephrine hydrochloride solution, 1:1,000 (from 0.5 to 1 cc.) should be given and the next dose reduced gradually working up again. The procedure demands painstaking care and patience in these sensitive individuals but almost all of them can be raised to a high amount with probable partial or complete relief. With such a patient, injections should be begun at once and given twice weekly.

DEXTROSE IN OXALATED BLOOD

To the Editor:—Will you please give me actual figures (if such are known) on the rate of disappearance of dextrose (*d*-glucose) from oxalated blood standing at room temperature and/or in the ice box. I know that dextrose must be determined at once, but it happens that the oxalated blood will stand around four or five hours before testing at times. I should like to know the rate of deterioration.

ISAAC APPERMAN, M.D., New York.

ANSWER.—The rate of disappearance of dextrose (*d*-glucose) from blood in vitro varies considerably with the source of the blood, and it may also vary greatly in different samples taken from the same source at different times. The sugar that disappears may in part give rise to lactic acid, another portion may be completely oxidized, while some is probably accounted for by bacterial decomposition.

The rate of disappearance of dextrose does not bear any direct relationship to the level of the blood sugar, so that in general it may be said that blood with a high sugar content loses relatively less dextrose in a given time than blood with a low sugar content. Glycolysis occurs most rapidly at its optimum temperature of 37 C. At icebox temperatures the rate of glycolysis is considerably decreased, as are also, of course, the effects of bacterial action. Citrates and oxalates, when used as anticoagulants, retard glycolysis to only a minor extent.

A recent report shows that defibrinated blood taken and kept with aseptic precautions at 37 C. may lose all its sugar content in from four to six hours. Other workers report that oxalated blood, kept at icebox temperatures (from 9 to 11 C.) may lose from 0 to 90 per cent of the initial dextrose content in twenty-four hours. The loss of sugar in four or five hours from oxalated blood, standing at room temperature, may therefore be considerable. The variability of the rate of this phenomenon in different specimens of blood makes it impossible to give a set figure or to supply a standard correction for such loss.

From a practical point of view it is possible to solve these difficulties by the use of fluorides, which have been shown to arrest glycolysis. A mixture of 1 part of potassium oxalate and 2 parts of sodium fluoride, finely ground and well mixed, may be used for this purpose, in place of the usual powdered oxalate. It is necessary, of course, to use proportionately more of this mixture than of the straight oxalate to prevent coagulation in a given amount of blood.

ANOMALIES OF BONES OF WRIST

To the Editor:—In a case of injury to the wrist of a woman, aged 27, roentgenograms were taken of both wrists. About 1 mm. distal to the styloid process of both ulnas there is a well defined shadow as of bone, regular in outline, about half the size of a buckshot. I am at loss to know what these particles might be. They are referred to as fragments of bone by the roentgenologist. They appear to me as sesamoid formations but I am unable to find any reference in Morris's Anatomy to sesamoids in this location. There is no history of injury to the opposite wrist.

HUBERT C. MILLER, M.D., Racine, Wis.

ANSWER.—Small bones may appear distal to the end of the styloid process of the ulna, but they are rather rare. Pfitzner described an antibrachial row of carpal bones just distal to the radius and the ulna. Dwight has observed that it may occasionally be seen located beyond the tip of the styloid process. Thilenius reported that this embryonic bony tissue was common in the early embryo and that in the second month it occurred in 65 per cent of specimens. The persistence of this tissue as bone is rarely seen in the adult. It is possible that, in the development, the tip of the styloid may be separated from the main part of the ulna. It is perfectly possible for sesamoids to occur in this region. They may occur in any location on the hand or fingers and may be multiple. A fracture of the tip of the styloid may fail to heal, and in the absence of evidence of injury to the radius it is difficult to

differentiate from a congenital anomaly. A fracture, however, usually shows some irregularity on the side nearer to the ulna and is somewhat concave or flattened. A similar flattening of the base of the styloid process from which it was broken is usually present. On examination, a sesamoid or separate anomalous carpal bone, as the triangulare, should be completely surrounded by a smooth capsule or cartilage, while in a non-united fracture of the styloid a scar with fibrous tissue should be found on microscopic examination. In the presence of this bony fragment on both sides and in the absence of evidence of injury, the presence of a congenital bony anomaly should be accepted.

PATHOLOGY OF ELECTRICAL SHOCK

To the Editor:—A young man came in contact with a live wire carrying 250 volts, direct current. Points of contact were the back of his neck and his feet. He fell clear. Artificial respiration was applied and he regained consciousness. Thirty minutes later he again became unconscious and again responded to artificial respiration. He remained in the hospital five days at rest. He says he had a headache during that time. Eight days later he apparently became confused mentally and was returned to the hospital for a period of five days. During this time his actions were perfectly normal and he was discharged. This accident occurred two months ago. The patient still complains of a severe headache and of tachycardia. Would you be kind enough to furnish me with any information you have on cases of this kind.

GEORGE W. GAY, M.D., Ironton, Mo.

ANSWER.—A path of electrical conduction that includes the head, neck and thorax is far more likely to be disastrous than one extending only from the abdominal region to the feet. The path that extends through the head is in turn of greater significance than that through the neck or thorax. This is recognized in most legal electrical executions, as one electrode is commonly placed on the head. Although neuroses subsequent to electrical shock are prolific and may possibly fully account for the manifestations in the case cited, genuine organic lesions may be produced apart from burns and at times in the absence of local burns. Capillary hemorrhage in the brain or spinal cord may be followed by chronic states in which increased intracranial pressure may play a part. Cellular changes, including edema, may be demonstrated in any portion of the central nervous system.

Electrical paths embracing the neck may lead to damage to the vagus nerves, which in the present case may account for the persistent tachycardia. The ventricular fibrillation, long associated with electrical shock, involving the heart, may not spontaneously clear up, and extensive permanent or prolonged harm may be produced. Cases similar to the one described are well known and might be cited, but information is likely to be found in experimental studies such as the following:

Factors in the Production of Nervous Lesions Following Electric Shock, *J. Indust. Hyg.*, March, 1932, p. 87.
Experimental Electric Shock, *J. Indust. Hyg.*, April, 1927, p. 140.
Histopathology of Different Types of Electric Shock on Mammalian Brains, *J. Indust. Hyg.*, November, 1930, p. 324.

SATIN WOOD DERMATITIS

To the Editor:—Can you give me any information as to symptoms and treatment of dermatitis due to contact or handling of satin wood, which is used as trimming in the manufacture of furniture?

J. E. BOLENDER, M.D., Grand Rapids, Mich.

ANSWER.—Satinwood is one of the most irritating of woods, and dermatitis from it is common among woodworkers. This is a form of simple dermatitis, dermatitis venenata, occurring as a macular, maculopapular, papular or vesicular eruption in groups, the general lesions close together or fused, the peripheral lesions farther and farther apart as they are farther from the center, wherefore the patch is ill defined. Exposed parts are first involved, but the eruption may spread to other parts or become even general. It itches intensely in the acute stage. If it is vesicular, cool wet dressings of 6 per cent solution of aluminum acetate in distilled water should be used, or saturated solution of boric acid, changed as often as they become warm, not thickly applied or closely covered for fear of preventing radiation of heat. This treatment may be alternated with calamine lotion, pulverized calamine and zinc oxide, 8 Gm. of each, in solution of calcium hydroxide, 120 cc. For the macular or papular eruptions, and for the moist ones after they have been dried by the lotion treatment, plain zinc paste, zinc oxide and starch, 25 per cent of each, in petrolatum or ointment of rose water to 100 per cent. This should be applied thinly several times a day and removed, when necessary, with oil or ointment of rose water. Internally, injections of the patient's own blood may hasten recovery, or intravenous or intramuscular injections of calcium gluconate or calcium lactate by mouth, 4 Gm., dissolved in hot water after each meal. After the attack has subsided the patient must obtain work where no satinwood is used, or an attempt may be made to desensitize; but this is difficult.

ETHER AS ANESTHETIC FOR TONSILLECTOMY

To the Editor:—Please advise me concerning these points about the after-effects of ether as an anesthetic given by the drop method: Could pains in the chest of a girl, aged 18 years, have any connection with the fact that she took ether three weeks previously, during a tonsil operation? She had no trouble after the operation until the onset of the pain and nothing could be made out on physical examination of the chest to account for the pain. Could the fact that a boy, aged 6 years, who took ether for a tonsillectomy, account for his getting dizzy and having violent headaches every time he remains in sunshine for any length of time, or if he gets hot in a warm room? I had nothing to do with giving the ether or with either tonsillectomy. It is my contention that ether quickly leaves the body and, barring ether pneumonia and rapid bronchial irritation, does not cause trouble to the taker. Please omit name.

M.D., Texas.

ANSWER.—The local action of a concentrated ether vapor occasionally causes a lung complication; such complications, however, occur within the first day or two after the anesthesia. Occasionally lung abscess develops after tonsillectomies and is due to the inhalation of solid food vomited during the operation or, more frequently, to infected material from the tonsils or to tonsillar tissue having been aspirated and lodged in the lung. The latter condition would be late in developing and during the early stages may be difficult to diagnose. A roentgenogram is usually of considerable value in clearing up the situation.

As ether is soon eliminated from the body, it is improbable that there is any connection between it and the boy's headache. Doubtless the pain is a coincidence and not the result of the ether anesthesia.

SYPHILIS IN PREGNANCY

To the Editor:—A woman, two and one-half months pregnant, has a chancre on the left labium minus and an inguinal adenitis on the corresponding side. The Kahn test of the blood is three plus positive. The chancre is of three weeks' duration, according to the history. I should like your opinion as to the probability of a nonsyphilitic child at term if treatment is carried out energetically during pregnancy. Also advise as to how close to term the treatment should be carried and how soon after delivery it could be resumed if delivery is not complicated. If, for any reason, the patient could not or would not continue treatment, is termination of the pregnancy justified? She has been deserted by her husband and is of limited means and must be self supporting. Please omit name.

M.D., Oklahoma.

ANSWER.—If energetic antisyphilitic treatment is given throughout the entire pregnancy, the outlook for a healthy baby is good. The treatment should be carried out continuously right up to the time of delivery and then begun again about two weeks after labor, unless there is some contraindication, such as puerperal fever. The baby should be carefully examined for evidences of syphilis. This means not only a thorough physical examination but also roentgenograms of the large bones. Wassermann and Kahn tests should be made on the child's blood at frequent intervals.

Syphilis is not an indication for the interruption of pregnancy even if the patient refuses treatment and even if there are social reasons why it is better for the patient not to be burdened with a child. In every large city there are a number of dispensaries or clinics where antisyphilitic therapy is given at low rates or free of charge. Furthermore, in the presence of active syphilis there is great danger of infection if the uterus is tampered with to produce an abortion.

INFLAMMATION OF PENIS

To the Editor:—I have a patient, aged 50, who is suffering (and suffering is right) from a chronic inflammation of the erectile tissue of the penis. The Wassermann reaction is negative. Right back of the head, the penis is circled with a band of hard fibrous tissue. Erection is complete up to this band but beyond it the penis remains soft and flabby. Will you kindly advise as to treatment and prognosis? Kindly omit name.

M.D., Montana.

ANSWER.—The symptoms described fit the picture of induratio penis plastica. The condition, which affects individuals between the ages of 45 and 60, is inflammatory in nature and involves the corpora cavernosa only. It is characterized pathologically by the presence of single or multiple fibrous plaques which begin at one point along the shaft and form circumscribed masses with sharply defined margins. The entire penis may be involved. The induration never becomes malignant nor does it ulcerate. The prognosis, in view of the pathology, is poor. Treatment is of little, if any, avail. The condition is not amenable to drugs. Direct treatment with diathermy, x-rays or radium offers questionable results. Extirpation may have to be resorted to.

RECTAL ETHER AND LUNG IRRITATION

To the Editor:—Will you kindly give me your opinion as to whether or not rectal ether anesthesia (Gwathmey method) is contraindicated in infections of the respiratory tract because of the danger of ether pneumonia during the period of elimination of the ether from the body through the respiratory system, and if this danger really exists.

C. B. CALDWELL, M.D., San Francisco.

ANSWER.—Experimental proof and observation of large numbers of patients who have respiratory trouble following ether anesthesia brings out one fact more prominently than any other, and that is the danger of administrating concentrated ether vapor. Offergeld (*Arch. f. klin. Chir.* **47**:175, 1898) found that closed methods of administration with high ether concentrations were followed by desquamation of bronchial epithelium, patches of lung consolidation and hemorrhage into the alveoli. The only complication following open administration with weak vapors was slight destruction of the epithelium, which became regenerated within a few days. Such observations indicate quite clearly that when ether affects the lungs it does so by its direct local action during its administration.

While it is true that ether is eliminated principally by the lungs, regardless of the method of its administration, there is doubt whether it is sufficiently concentrated in rectal anesthesia to affect the lungs.

ALCOHOL AND STRYCHNINE

To the Editor:—In case a man had been drinking alcohol and had been drinking previous to taking poison and then was to take a dose of strychnine dissolved in alcohol, might the effect of his drinking alcohol act on him so that he would not present the typical symptoms of strychnine poisoning, and might the fact of his drinking alcohol act as an antidote so that it might not kill him as quickly as it would otherwise? I have been unable to find any material on this question. Kindly omit name.

M.D., Iowa.

ANSWER.—A sufficient dose of alcohol in the system would no doubt profoundly influence the clinical picture of strychnine poisoning. Indeed, if the individual should be in that stage of alcohol narcosis in which the spinal reflexes are paralyzed, the strychnine convulsions even might be lacking. In this manner, alcohol might act as an antagonist to strychnine.

IMMUNIZATION AGAINST SCARLET FEVER

To the Editor:—What is the value of active immunization against scarlet fever? The prophylactic treatment with serum in scarlet fever? The treatment of scarlet fever by specific antitoxins and serums?

OSCAR E. FOX, M.D., Reading, Pa.

ANSWER.—Active immunization against scarlet fever properly carried out to the point of negative skin test protects against the disease. Prophylactic treatment with scarlet fever antitoxin affords only temporary protection. It should be followed by active immunization with the toxin. Scarlet fever antitoxin is a valuable remedy. Administered early in the disease, it gives striking results in reducing the incidence and severity of complications, in addition to relieving the toxemia.

PHLYCTENULAR CONJUNCTIVITIS

To the Editor:—Kindly give me the latest treatment for phlyctenular conjunctivitis.

WILLIAM F. TYLER, M.D., Beaumont, Texas.

ANSWER.—1. Local: Silver nitrate, 1 per cent, instilled once daily or every other day, until the secretion is stopped. A mild cleansing wash, such as 1:5,000 mercuric oxycyanide or 1:2,500 metaphen, to be used in an eye cup two or three times daily. Yellow mercuric oxide ointment instilled at bedtime.

2. General: Free catharsis. Treatment and eradication of nasal or tonsillar disorders. Such general hygienic measures as are necessary to bring the general physical condition to normal.

ARTHRITIS AND POLYCYSTIC KIDNEY

To the Editor:—I have just completed a case of severe arthritis deformans in a man, aged 68. The condition began about twelve years ago. He had always been a healthy vigorous man before. At the postmortem, both kidneys and the liver were polycystic. In your opinion is there any relation between the postmortem observations and the arthritis?

MERRILL S. DAVIS, M.D., Marion, Ind.

ANSWER.—So far as known at the present time there is no reason to believe that there was any relation between the arthritis and the polycystic condition of the kidneys and liver.

Council on Medical Education and Hospitals

COMING EXAMINATIONS

ALABAMA: Montgomery, July 11. Sec., Dr. J. N. Baker, 519 Dexter Ave., Montgomery.

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Montreal, Sept. 19. Sec., Dr. William H. Wilder, 122 S. Michigan Ave., Chicago.

ARIZONA: Phoenix, July 5-6. Sec., Dr. B. M. Berger, 12 North Central Ave., Phoenix.

CALIFORNIA: *Reciprocity.* Los Angeles and San Francisco, June 15. *Regular.* San Francisco, July 11-14. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento.

COLORADO: Denver, July 5. Sec., Dr. Wm. Whitridge Williams, 422 State Office Bldg., Denver.

CONNECTICUT: *Basic Science.* New Haven, June 11. Prerequisite to license examination. Address State Board of Healing Arts, 1895 Yale Station, New Haven. *Regular.* Hartford, July 12-13. Sec., Dr. Thomas P. Murdock, 147 W. Main St., Meriden. *Homeopathic.* New Haven, July 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

DELAWARE: Wilmington, June 14-16. Sec., Dr. Harold L. Springer, 1013 Washington St., Wilmington.

DISTRICT OF COLUMBIA: *Basic Science.* Washington, June 29-30. *Regular.* Washington, July 11-12. Sec., Dr. W. C. Fowler, 203 District Bldg., Washington.

FLORIDA: Tampa, June 13-14. Sec., Dr. W. M. Rowlett, 812 Citizens Bank Bldg., Tampa.

GEORGIA: Atlanta, June 15-16. Joint Sec., Mr. R. C. Coleman, 111 State Capitol Bldg., Atlanta.

HAWAII: Honolulu, July 11-14. Sec., Dr. James A. Morgan, Room 48, Young Bldg., Honolulu.

ILLINOIS: Chicago, June 28-July 1. Supt., Mr. Paul B. Johnson, Springfield.

INDIANA: Indianapolis, June 21-23. Sec., Dr. William R. Davidson, 413 State House, Indianapolis.

IOWA: Iowa City, June 7-9. Dir., Mr. H. W. Grefe, Capitol Building, Des Moines.

KANSAS: Kansas City, June 21-22. Sec., Dr. C. H. Ewing, Larned.

KENTUCKY: Louisville, June 8-10. Sec., Dr. A. T. McCormack, 532 W. Main St., Louisville.

LOUISIANA: New Orleans, June 9-11. Sec., Dr. Roy B. Harrison, 1507 Hibernia Bank Bldg., New Orleans.

MAINE: Augusta, July 5-6. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MARYLAND: *Homeopathic.* Baltimore, June 14-15. Sec., Dr. John A. Evans, 612 W. 40th St., Baltimore. *Regular.* Baltimore, June 21-24. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore.

MASSACHUSETTS: Boston, July 12-14. Sec., Dr. Stephen Rushmore, 144 State House, Boston.

MICHIGAN: Ann Arbor and Detroit, June 7-9. Sec., Dr. Nelson McLaughlin, 1010 Maccabee Bldg., Detroit.

MINNESOTA: *Basic Science.* Minneapolis, June 7-8. Sec., Dr. J. Charmley McKinley, 126 Millard Hall, University of Minnesota, Minneapolis. *Regular.* Minneapolis, June 21-23. Sec., Dr. E. J. Engberg, 524 Lowry Medical Arts Bldg., St. Paul.

MISSOURI: St. Louis, June 14-16. Sec., Dr. James Stewart, Capitol Bldg., Jefferson City.

NATIONAL BOARD OF MEDICAL EXAMINERS: Examinations in Parts I and II will be held at all centers where there are five or more candidates, but not at Durham, Minneapolis, nor New Haven, June 27-29. Ex. Sec., Dr. Everett S. Elwood, 225 South 15th St., Philadelphia.

NEBRASKA: *Regular.* Omaha, June 9-11. Dir., Mrs. Clark Perkins, Lincoln.

NEW JERSEY: Trenton, June 21-22. Sec., Dr. James J. McGuire, 1101 Trenton Trust Bldg., Trenton.

NEW YORK: Albany, Buffalo, New York, Syracuse, June 27-30. Chief, Professional Examinations Bureau, Mr. Herbert J. Hamilton, Room 315, State Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 20. Sec., Dr. John W. MacConnell, Davidson.

NORTH DAKOTA: Grand Forks, July 5-8. Sec., Dr. G. M. Williamson, Grand Forks.

OHIO: Columbus, June 7-10. Sec., Dr. H. M. Platter, 85 E. Gay St., Columbus.

OKLAHOMA: Oklahoma City, June 8-10. Sec., Dr. J. M. Byrum, Shawnee.

OREGON: Portland, July 5-7. Sec., Dr. C. J. McCusker, 1014 Medical Dental Bldg., Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 5-9. Sec., Mr. Charles D. Koch, Dept. of Public Instruction, Harrisburg.

RHODE ISLAND: Providence, July 7-8. Dir., Dr. Lester A. Round, 319 State Office Bldg., Providence.

SOUTH CAROLINA: Columbia, June 28. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

TEXAS: Marlin, June 21-23. Sec., Dr. T. J. Crowe, 918-19 Mercantile Bank Bldg., Dallas.

UTAH: Salt Lake City, July 6-8. Dir., Mr. S. W. Golding, 326 State Capitol Bldg., Salt Lake City.

VERMONT: Burlington, June 22-24. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 15-18. Sec., Dr. J. W. Preston, 803 Medical Arts Bldg., Roanoke.

WASHINGTON: *Basic Science.* Seattle, July 7-8. *Regular.* Seattle, July 11-12. Dir., Mr. Charles Maybury, Olympia.

WEST VIRGINIA: Harpers Ferry, July 12. Sec., Dr. W. T. Henshaw, State Health Dept., Charleston.

WISCONSIN: Milwaukee, June 28-30. Sec., Dr. Robert E. Flynn, 315 State Bank Bldg., LaCrosse.

WYOMING: Cheyenne, June 6. Sec., Dr. W. H. Hassed, Capitol Bldg., Cheyenne.

Minnesota January Report

Dr. E. J. Engberg, secretary, Minnesota State Board of Medical Examiners, reports the oral, written and practical examination held at Minneapolis, Jan. 19-21, 1932. The examination covered 12 subjects and included 60 written questions. An average of 75 per cent was required to pass. Forty-three candidates were examined, all of whom passed. Four physicians were licensed by reciprocity with other states and 1 physician was licensed by endorsement. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
College of Medical Evangelists		(1931)	89.6, 90
Stanford University School of Medicine		(1930)	91.3
University of Colorado School of Medicine		(1929)	88.2
University of Georgia Medical Department		(1930)	94.2
Loyola University School of Medicine		(1931)	90.2
Rush Medical College		(1931)	93.2, 95
Harvard University Medical School		(1929)	91.5
University of Michigan Medical School		(1931)	87.6
University of Minnesota Medical School		(1928) (1931) 88, 89.1,* 89.4,* 89.5, 90.1,* 90.1,* 90.2, 90.3,* 90.6,* 91.3,* 91.6, 92.6,* 92.6, 93.4, 95.1,* (1932) 87.1, 88.4, 91.1, 92.4	92,
Creighton University School of Medicine		(1930)	85.4
Columbia University College of Phys. and Surgs.		(1929)	91.5
University of Buffalo School of Medicine		(1928)	90.6
University of Oregon Medical School		(1929)	92.6
Jefferson Medical College of Philadelphia		(1928)	92.3
University of Pennsylvania School of Medicine		(1928) (1930) 92.1	90.4,
University of Pittsburgh School of Medicine		(1929)	88.3
University of Wisconsin Medical School		(1930)	91, 91.1
University of Manitoba Faculty of Medicine		(1930)	89.1
Queen's University Faculty of Medicine		(1926)	92.2
Royal Univ. of Florence Faculty of Med. and Surg.		(1925)	86.4

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University Medical School		(1930)	Illinois
Rush Medical College		(1924), (1929)	Illinois
University of Wisconsin Medical School		(1928)	Wisconsin

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
Woman's Medical College of Pennsylvania		(1929)	N. B. M. Ex.

* These applicants have received their M.B. degree and will receive their M.D. degree on completion of an internship.

Pennsylvania January Report

Mr. Charles D. Koch, secretary, Pennsylvania State Board of Medical Education and Licensure of the Department of Public Instruction, reports the oral and written examination held at Philadelphia and Pittsburgh, Jan. 5-9, 1932. Thirty-eight candidates were examined, 37 of whom passed and one failed. Six physicians were licensed by reciprocity with other states and three physicians were licensed by endorsement from Jan. 5 to 28, 1932. The following colleges were represented:

College	PASSED	Year Grad.	Number Passed
University of Colorado School of Medicine		(1929)	1
Georgetown University School of Medicine		(1930)	1
Rush Medical College		(1931, 2)	2
University of Kansas School of Medicine		(1927)	1
University of Louisville School of Medicine		(1930)	1
University of Maryland School of Medicine and College of Physicians and Surgeons		(1916)	1
University of Minnesota Medical School		(1931)	1
St. Louis University School of Medicine		(1929)	1
Columbia University Medical Department		(1892)	1
Hahnemann Medical College and Hospital of Philadelphia		(1928), (1930, 2)	3
Jefferson Medical College of Philadelphia		(1929, 3), (1930, 2)	5
Temple University School of Medicine		(1930, 3)	3
Univ. of Penn. School of Med.		(1929, 3), (1930, 3), (1931)	7
Woman's Medical College of Pennsylvania		(1930, 2)	2
University of Texas School of Medicine		(1929)	1
Medical College of Virginia		(1929)	1
University of Toronto Faculty of Medicine		(1908), (1930)	2
McGill University Faculty of Medicine		(1925), (1927)	2
University of St. Thomas College of Medicine		(1922)	1

College	FAILED	Year Grad.	Number Failed
Howard University School of Medicine		(1930)	1

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Loyola University School of Medicine		(1928)	Michigan
Detroit College of Medicine and Surgery		(1928)	Michigan
University of Michigan Medical School		(1929)	Michigan
Hahnemann Med. College and Hosp. of Philadelphia		(1926)	New Jersey
University of Pennsylvania School of Med.		(1924), (1925)	Minnesota

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
University of Michigan Medical School		(1929)	N. B. M. Ex.
Columbia University College of Phys. and Surgs.		(1929)	N. B. M. Ex.
Syracuse University College of Medicine		(1926)	N. B. M. Ex.

SCHOOLS OFFERING SUMMER COURSES IN 1932

Prepared by the Council on Medical Education and Hospitals

ARKANSAS

UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE, 300 West Markham Street, Little Rock.—On May 30 the following courses will be offered to undergraduates: physiologic chemistry, histology, embryology and pathology. Courses in gross anatomy and neuro-anatomy will be offered on July 5. Address Frank Vinsonhaler, M.D., dean.

CALIFORNIA

STANFORD UNIVERSITY SCHOOL OF MEDICINE, 2398 Sacramento Street, San Francisco.—No routine teaching of undergraduate work, but offers special opportunities for study and research to both graduates and medical students in the clinics, wards and laboratories. Work also offered to graduates and undergraduates as "special workers" in the various departments includes pharmacology, pathology, general medicine, diabetes, chest diseases, pediatrics, neuropsychiatry, skin and syphilis, metabolism laboratory, radiology, physical therapy technic, general surgery, fracture clinic, orthopedic surgery, genito-urinary surgery, ophthalmology, otolaryngology, surgical pathology, surgical anatomy, obstetrics and gynecology, and female urology. Minimum attendance is four weeks. Make application to William Ophuls, M.D., dean.

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL, Parnassus and Third avenues, San Francisco.—Courses for graduates in medicine will be given from June 6 to June 18. The morning and all-day courses consist of general medicine, general surgery, otorhinolaryngology, genito-urinary diseases, ophthalmology, general pathology, and general clinical pediatrics. The afternoon courses consist of circulatory diseases, diseases of the blood forming organs, diseases of the endocrine glands including diabetes, diseases of the gastro-intestinal tract, special laboratory diagnosis, and operative technic. Ear, nose, and throat surgery will be offered in the evening course. In addition to the regular courses there will be round table discussions, lectures and clinicopathological conferences open to the medical public without charge. Address Langley Porter, M.D., dean.

COLORADO

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, 4200 East Ninth Avenue, Denver.—Term extends from June 20 to August 26, offering the following courses to graduates and undergraduates in medicine: anatomy, bacteriology, biochemistry, clinical pathology, pathology, physiology and pharmacology. Address Maurice H. Rees, M.D., dean.

CONNECTICUT

NEW HAVEN SCHOOL OF PHYSICAL THERAPY, 303 Whitney Avenue, New Haven.—A course for graduates in medicine will be offered on June 6 and August 8. Address Harry Eaton Stewart, M.D., director.

DISTRICT OF COLUMBIA

HOWARD UNIVERSITY SCHOOL OF MEDICINE, Fifth and W streets, N.W., Washington.—During the coming summer, practical work in obstetrics and a limited number of clinical clerkships in medicine and surgery will be offered to undergraduate students. Address Numa P. G. Adams, M.D., dean.

ILLINOIS

RUSH MEDICAL COLLEGE, University of Chicago, 1758 West Harrison Street, Chicago.—The courses in the third and fourth years of the medical schools are continued at Rush Medical College during the summer quarter in the departments of pathology, medicine, pediatrics, surgery, obstetrics and gynecology, laryngology and otology, ophthalmology, and dermatology. There will be opportunity for a limited number of qualified special students to take work in these departments. Postgraduate courses in otolaryngology, ophthalmology, dermatology and radiology for a limited number of qualified students who are able to spend one or more years in study are continued during the summer quarter. In radiology, courses for shorter periods may be arranged. For further particulars, consult or address the dean or registrar.

GRADUATE SCHOOL OF MEDICINE OF THE DIVISION OF THE BIOLOGICAL SCIENCES, University of Chicago, Fifty-Eighth Street and Ellis Avenue, Chicago.—Term extends from June 20 to August 26, offering to medical students the following courses: anatomy, hygiene and bacteriology, medicine, dermatology, neurology and neurosurgery, roentgenology, obstetrics and gynecology, pathology, pediatrics, pharmacology, physiology, surgery, clinical lectures, and clinical lectures in special fields. Address B. C. H. Harvey, M.D., dean.

GRADUATE SCHOOL OF PEDIATRICS, Children's Memorial Hospital, 707 Fullerton Avenue, Chicago.—One course in pediatrics, beginning August 1 and continuing for four weeks, will be offered graduates. The forenoons are taken up with medical pediatrics consisting of ward walks, outpatient and amphitheater clinics and demonstrations of special cardiac, syphilitic, neurologic, nephritis, infant and nutrition clinics, and of lectures on infant feeding, the newer phases of the contagious diseases of the blood, and so on. The afternoons are devoted to practical instructions in clinical pathology with special reference to laboratory methods of diagnosis; to x-ray demonstration; and to the specialties of surgery and orthopedics, and skin, eye, ear, nose and throat diseases. There is a weekly orthopedic ward walk and a weekly operative orthopedic clinic. A special course of one hour a week is given in pediatric technic covering lumbar and ventricular puncture, paracenteses and aspirations, intubation, collection of urine, blood typing, transfusion and the various methods of introducing fluids into the body. Eight didactic lectures are given in this course. Address all inquiries direct to the Graduate School.

IOWA

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE, Iowa City.—The first term of the summer session will begin on June 13 and the second

term on July 25. Courses are offered to graduates and undergraduates in anatomy, bacteriology, physiology, hygiene and preventive medicine. One freshman course in biochemistry will extend through both terms. Address Summer Session Office, Iowa City.

KANSAS

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, Lawrence.—On June 9, courses will be offered to graduates and students in anatomy, bacteriology, biochemistry, medicine and physiology. The course in medicine will be given at Kansas City. Address O. O. Stoland, Ph.D., Secretary of the Medical Faculty.

LOUISIANA

TULANE UNIVERSITY OF LOUISIANA SCHOOL OF MEDICINE, 1430 Tulane Avenue, New Orleans.—During the early part of June, courses for medical students will be given in anatomy, embryology, histology and organology, neuro-anatomy and medicine. Address C. C. Bass, M.D., dean.

MARYLAND

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, Lombard and Greene streets, Baltimore.—A three weeks' general review course will be offered to physicians in June. Registration is limited and preference will be given to physicians registered in Maryland. The course will consist of lectures, ward rounds, clinics, dispensary clinics, laboratory, therapeutic procedures, roentgen diagnosis, and electrocardiography. Address the Dean of the Medical School.

MASSACHUSETTS

BOSTON UNIVERSITY SCHOOL OF MEDICINE, 80 East Concord Street, Boston.—Offers a course in pharmacology from June 14 to July 23 for undergraduates. This course consists of systematic pharmacology, pharmacy, pharmaceutical chemistry, materia medica, toxicology, experimental pharmacology, conferences and reviews. Since the number of students is limited, arrangements should be made immediately. Address all communications to the Registrar.

HARVARD UNIVERSITY MEDICAL SCHOOL, 240 Longwood Avenue, Boston.—Offers an intensive five day course in genito-urinary surgery from July 11 to 15. This course is for graduates and consists of lectures, clinical lectures, demonstrations of cases and pathologic material, and operative clinics. On June 20 a graduate course in internal medicine will be offered, which will continue for six weeks. This course offers to properly qualified graduates in medicine an opportunity to receive instruction in the care of the sick, with particular reference to the diagnosis and treatment of common maladies. It is also designed to provide an adequate review of the more common problems that confront the general practitioner and the internist, with special attention to the recent advances in both diagnosis and therapeutics. Courses for graduates and undergraduates are offered throughout the summer in anatomy, physiology, biologic chemistry, bacteriology, pathology, preventive medicine and hygiene, pediatrics, medicine, roentgenology, diseases of the nervous system, surgery, anesthesia, proctology, genito-urinary surgery, orthopedic surgery, physical therapy, obstetrics, gynecology, dermatology and syphilology, ophthalmology, laryngology, and otology. Address Frank R. Ober, M.D., assistant dean.

HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH, 55 Van Dyke Street, Boston.—If individual work in some special field is desired, it is possible to arrange a program of study or research work by applying directly to the head of the department in which the work is to be done.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge.—Offers one course in general bacteriology. Address all inquiries direct to the school.

MICHIGAN

UNIVERSITY OF MICHIGAN DEPARTMENT OF POST-GRADUATE MEDICINE, University Hospital, Ann Arbor.—Three courses will be offered from June 6-18 in proctology, gynecologic pathology, and a practitioners' course. Address the Department of Post-Graduate Medicine.

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL, Ann Arbor.—The summer session begins June 27 and ends August 19. Courses are open to practitioners of medicine, undergraduate students registered in recognized medical schools, and all persons qualified to pursue them to advantage. The undergraduate work will include: (1) all of the laboratory and some of the lecture courses of the first and second year; (2) some of the demonstration courses of the third year; (3) certain of the clinical courses of the senior year; (4) elective courses advantageous to medical students, technicians and others. Courses cover work in anatomy, bacteriology, dermatology and syphilology, internal medicine, neurology, obstetrics and gynecology, ophthalmology, otolaryngology, pathology, pediatrics, pharmacology, materia medica and therapeutics, physiologic chemistry, physiology, roentgenology and surgery. Address the Dean of the Medical School.

MINNESOTA

UNIVERSITY OF MINNESOTA MEDICAL SCHOOL, Minneapolis.—The summer quarter is divided into two terms, the first extending from June 15 to July 23; the second, from July 25 to August 27. Students may attend either or both terms. All courses offered are open to physicians and medical students. Courses in anatomy, bacteriology, pathology, pharmacology, physiology, preventive medicine and public health, medicine, obstetrics and gynecology, ophthalmology and otolaryngology, pediatrics, radiology and surgery are given. Address Elias P. Lyon, M.D., dean.

MISSOURI

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE, 1402 South Grand Boulevard, St. Louis.—From June 6 to July 30, courses for undergraduates will be offered in the different divisions of anatomy, bacteriology, biochemistry, pathology and physiology. For information, address the Director of the Summer Session.

NEBRASKA

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE, Forty-Second Street and Dewey Avenue, Omaha.—Courses in clinical pathology and physiology will be offered to medical students on June 4. A week's postgraduate course will be offered from June 6 to June 11. This course will be given under the auspices of the departments of obstetrics and pediatrics and will be confined largely to practical work in the wards and clinics. Address all communications to the Dean's office.

NEW JERSEY

PHYSIATRIC INSTITUTE, Morristown.—Offers a one month course in July. The course is composed of lectures, laboratory and clinical work, and covers the subjects of diabetes, obesity, cardiorenal-vascular diseases and other metabolic disorders, and will probably include as a new feature the insulin treatment of tuberculosis. Address Frederick M. Allen, M.D., director.

NEW YORK

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS, 630 West One Hundred and Sixty-Eighth Street, New York.—A course in gastro-enterology will be offered from June 6 to July 27. This is a course of lectures designed for graduates in medicine desiring a working knowledge of the principles underlying the modern diagnosis and treatment of gastro-intestinal disorders. Address Willard C. Rappleye, M.D., dean.

UNIVERSITY OF BUFFALO SCHOOL OF MEDICINE, 24 High Street, Buffalo.—Courses in systemic anatomy, and general pathology and pathologic histology for second year students will be given from July 5 to September 17. Address Edward W. Koch, M.D., dean.

UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE, Twenty-Sixth Street and First Avenue, New York.—Postgraduate courses will be offered in regional anesthesia and pediatrics during the early part of June. A graduate course is offered to qualified physicians who intend to specialize in dermatology. This course includes diagnosis and treatment of skin diseases, radiotherapy in skin diseases and roentgen therapy.

UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY, Crittenden Boulevard, Rochester.—Offers a course for physicians in ophthalmology during the month of August. Address all inquiries direct to the school.

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL, 341-353 West Fiftieth Street, New York.—Postgraduate courses will be offered for the general practitioner only, with the exception of special courses in pathology, roentgenology and refraction. Address F. H. Dillingham, M.D., medical executive officer.

NEW YORK POST-GRADUATE MEDICAL SCHOOL, Second Avenue at Twentieth Street, New York.—The following postgraduate courses will be offered to physicians during the summer: biochemistry, dermatology and syphilology, gynecology, lectures on refraction, bacteriology, pathology, pediatrics and urology. In addition to these the department of medicine will offer a four weeks' intensive course in cardiology, gastro-intestinal diseases, diseases of metabolism and pulmonary tuberculosis in September. A three weeks' course in applied immunology will be given from June 6 to June 25. Address all inquiries direct to the school.

SCHOOL OF OPHTHALMOLOGY AND OTOLOGY OF THE NEW YORK EYE AND EAR INFIRMARY, Second Avenue, corner Thirteenth Street, New York.—One month courses will be offered during the summer months, as during the rest of the year, with the exception of refraction, which is a three months' course. Address the secretary.

TRUDEAU SCHOOL OF TUBERCULOSIS, Saranac Lake.—The second section of the summer courses will be offered from June 14 to June 18. This section will include complications and differential diagnosis, clinics in laryngeal, aural and surgical tuberculosis, nontuberculous complications, institution organization and management, prophylaxis, surgical and laboratory technics, and the like. Address all inquiries to the secretary.

OHIO

OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, Neil and Eleventh avenues, Columbus.—Bacteriology will be the only course offered during the summer. It will be offered by the department in either the Graduate School or the College of Arts and Sciences. Address all inquiries direct to the school.

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE, 2109 Adelbert Road, Cleveland.—Offers an abridged course in gross anatomy to be given in June. Address all inquiries direct to the school.

OKLAHOMA

UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE, Third and Stiles streets, Oklahoma City.—Offers the following courses to undergraduates this summer: anatomy, bacteriology, biochemistry and pharmacology, histology and embryology, physiology and pathology. Address Lewis J. Moorman, M.D., dean.

PENNSYLVANIA

UNIVERSITY OF PENNSYLVANIA GRADUATE SCHOOL OF MEDICINE, Thirty-Sixth Street and Hamilton Walk, Philadelphia.—The following courses will be offered during the summer: clinical and sociological tuberculosis, cardiology, parasitology and tropical medicine, clinical gastro-enterology, allergy, diabetes mellitus, basal metabolism, clinical dermatology, neuro-anatomy, neurophysiology and neuropathology, neuro-otology, gynecology for the general practitioner, cystoscopy, selected office procedures in gynecology, ophthalmic operations, ocular refractions, slit lamp microscopy, otologic operations, rhinolaryngologic operations, correction of defects of speech, and clinical biochemistry. Address George H. Meeker, Ph.D., dean.

TENNESSEE

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 879 Madison Avenue, Memphis.—All the courses of the curriculum will be offered during the summer quarter. Address O. W. Hyman, Ph.D., dean.

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE, Twenty-First and Edgehill, Nashville.—Offers short courses for postgraduates in medicine this summer. Address Waller S. Leathers, M.D., dean.

TEXAS

BAYLOR UNIVERSITY COLLEGE OF MEDICINE, 810 College Avenue, Dallas.—The following courses will be offered from June 13 to August 1: physiologic chemistry, histology, bacteriology and neuro-anatomy. Address W. H. Moursund, M.D., dean.

VIRGINIA

MEDICAL COLLEGE OF VIRGINIA, Twelfth and Clay streets, Richmond.—A two weeks' course has been arranged for the Negro practitioners of the state of Virginia. This course will be held in connection with the St. Philip Hospital, which is under the supervision of the medical school, and will be conducted during the last two weeks in June. Address Lee E. Sutton, Jr., M.D., dean.

UNIVERSITY OF VIRGINIA DEPARTMENT OF MEDICINE, Charlottesville.—All of the medical science courses will be given during the first term of the summer quarter beginning on June 20 and ending July 30. The following courses are offered primarily for medical students who are deficient in these subjects and desire to make a review: histology, embryology, anatomy, biochemistry, physiology, bacteriology and pharmacology. Address James C. Flippin, M.D., dean.

WISCONSIN

UNIVERSITY OF WISCONSIN MEDICAL SCHOOL, 412 North Charter Street, Madison.—Summer quarter begins June 27 and ends August 5, offering courses in histology and organology, embryology, three courses in anatomy, two courses in bacteriology, fourth year medicine and surgery open only to Wisconsin students, two courses in pharmacology, physiologic chemistry, and advanced physiology and research. Address all inquiries direct to the school.

Book Notices

The Structure and Composition of Foods. By Andrew L. Winton, Ph.D., and Kate Barber Winton, Ph.D. Volume I: Cereals, Starch, Oil Seeds, Nuts, Oils, Forage Plants. Cloth. Price, $8.50. Pp. 710, with 274 illustrations. New York: John Wiley & Sons, Inc.; London: Chapman & Hall, Ltd., 1932.

This is the first of the three volumes of a comprehensive work in the English language comparable with, yet differing from, the voluminous works in German and French, giving the results on the composition and macroscopic and microscopic structure of a great variety of products scattered through numerous journals and publications. The products described, chiefly natural or obtained by mechanical separation such as milling or pressing, or operations involving simple chemical changes, cover a broad geographic range—oriental and occidental, temperate and tropical. The products are classified according to economic use. This volume includes a short introduction explanatory of general technical terms, plan of the volumes and information to aid in the interpretation of data; part I treats of the true cereals, starch seeds and weed seeds; part II, of oil seeds, oil nuts and weed seeds free of starch; part III, of plants grown for green forage or hay and grouped under the three headings of grasses, legumes and cacti. The entire work promises to be a descriptive reference compendium of great usefulness to all seeking information on a vast variety of well known and little known foods. The American academic and industrial reference libraries have need for this practical contribution.

Exercise and Its Physiology. By Adrian Gordon Gould, Ph.B., M.D., Assistant Medical Adviser and Assistant Professor of Hygiene in Cornell University, and Joseph A. Dye, A.B., Ph.D., Assistant Professor of Physiology in Cornell University. Cloth. Price, $3. Pp. 434, with 56 illustrations. New York: A. S. Barnes & Company, Inc., 1932.

The vast amount of research on the physiology of exercise and rest in recent years has prompted the publication of several books on the subject. The authors here review the accumulated material and present their conclusions "in nontechnical language" so as to make the book especially valuable for students of physical education and for students and teachers of physiology. Where the evidence is still controversial, they present both points of view. The book is divided into twenty-six chapters, which consider the mechanisms of movement, the physiologic properties of muscle, the nature of fatigue and of recovery, and the physiology of the blood and respiration during exercise. Four chapters concern the circulation and its adaptation to activity. The volume concludes with a consideration of the second wind and of the effects of training on exercise and activity.

Although the authors have attempted to make their presentation nontechnical, it certainly could be followed by few except those who have had early college physiology: for example, the following sentence: "There are two possible explanations for the increased glycogenolysis following splanchnic stimulation, first, that the hepatic branches of these nerves when stimulated effect the breakdown of glycogen directly (*nervous* or *direct*), and second, that the suprarenal branches produce an increased output of adrenin which in turn effects the glycogenolysis (*hormonal* or *indirect*)." Notwithstanding this minor criticism, the book is an exceedingly useful summary of current knowledge in its field.

Die experimentellen und klinischen Grundlagen der Therapie mit Calciumsalzen. Von Dr. Eugen Baráth, Assistent an der III. med. Klinik der Kgl. Pázmány Péter Universität in Budapest. Hefte des Collegium Hungaricum in Wien. X. Paper. Pp. 117. Budapest: Königl. Ungar. Universitätsdruckerei, 1931.

In an excellent presentation, systematic in arrangement and characterized by conciseness and clarity, the author discusses the rôle of calcium in its direct application to specific problems and its relationship to the general problem of ionic phenomena and physicochemical problems. Throughout the entire discussion he maintains the attitude of a detached observer carefully evaluating the facts and interpretations and at no time losing himself to fall into fanciful speculations. The work is divided into four parts. In the first part the author discusses ionic phenomena and the cell, the effect of calcium on the perfused organ, and calcium metabolism in all its phases. The second portion deals with the pharmacology of calcium salts and an analysis of the experimental and therapeutic use of calcium compounds. The third section deals with the clinical use of calcium in acute hemorrhage, tetany, asthmatic conditions and intoxications. The last chapter presents an interesting survey of the significance of ionic therapy in the light of physical chemistry. The bibliography is concise and carefully selected. This work presents the subject in a short discussion and, despite the large number of papers on the subject, no important fact has been omitted. It will serve a useful purpose for those interested in calcium therapy.

The Medical Value of Psychoanalysis. By Franz Alexander, M.D. Cloth. Price, $2.75. Pp. 247, with 5 illustrations. New York: W. W. Norton & Company, 1932.

THE JOURNAL published, some months ago, a Harvey lecture on psychoanalysis by Dr. Alexander. The present volume includes this chapter, together with an expansion of its views, in book form. Dr. Alexander is a medical psychoanalyst, primarily a teacher and an investigator, but also a successful practitioner. He writes directly and does not confuse his readers with much of the special jargon that has attached itself to this field. The book includes five chapters, on psychoanalysis and medicine, the present status of psychoanalysis as a theoretical and therapeutic system, critical considerations on the psychoanalytic treatment of psychoses, psychogenic factors in organic diseases, and psychoanalysis in medical education. Dr. Alexander defends the view that separation of the psychologic and somatic approaches to understanding of disease is artificial and obsolete. He recognizes the resentment of Sigmund Freud at the refusal of medicine to appreciate his life work, but he feels that the proper place for psychoanalysis is in the medical curriculum and that it must inevitably become a part of medical study. Indeed, he concludes with an outline of the manner in which the teaching of psychoanalysis should be embodied in the medical curriculum.

Anleitung und Indikationen für Bestrahlungen mit der Quarzlampe „Künstliche Höhensonne" mit Berücksichtigung der leuchtenden Wärmestrahlen. Von Geh. Sanitätsrat Dr. Hugo Bach. Unter Mitwirkung von Dr. Ferdinand Rohr, Dirig. Arzt des Kinderkrankenhauses „zum Kind von Brabant," Kassel. Twenty-second-twenty-third edition. Paper. Price, 8.40 marks. Pp. 258, with 41 illustrations. Leipzig: Curt Kabitzsch, 1931.

This is a reasonably complete dissertation on the clinical studies of light therapy, principally in relation to the quartz lamp and aids such as heat lamps. It especially avoids reference to carbon arc and other light sources, which have been found to play a part in treatment of disease, as well as the mercury quartz lamp. It goes into details as to the technic and mode of action, so far as is known, of the light emitted by the quartz lamp. Dosage and meters for measuring are considered. The indications in general medicine, surgery, children's diseases, skin diseases, gynecology, and diseases of the eye, ear, nose, throat and teeth are taken up. The illustrations are appro-

priate but are mostly repetitions. There are many claims made in the book which would not withhold critical analysis. The author makes practically no mention of light authorities outside of Germany, but ample references are given to German authorities. Particular claims are made for light in certain forms of tuberculosis, such as the larynx and the ears, which do not agree with ideas held on the subject in this country. Special applicators and modes of irradiation are emphasized with only personal clinical impressions to back them up. With this understanding, the book can be considered a valuable addition and one that covers the subject satisfactorily.

The Social and Ethical Significance of Nursing: A Series of Addresses. By Annie Warburton Goodrich, Dean, Yale University School of Nursing. Fabrikoid. Price, $3. Pp. 401, with 13 illustrations. New York: Macmillan Company, 1932.

Dean Goodrich has prepared a valuable treatise on the ethical significance of nursing, and added greatly to the cause of the sound education of the nurse. She has shown clearly that "from the standpoint of sustained interest and creative opportunity few activities offer as much as nursing, but such returns demand the insight and resourcefulness which are the rewards of a liberal education." In speaking of the nurse and the hospital she holds up the standard that all nurse educators of today should keep in mind: "No sounder foundation for practice was ever laid for a profession than that for nursing through its provisions for constant and close association with the patients in the wards of the hospital. Whatever the changes in the curriculum through the evolution in the medical sciences, the immeasurable values of the clinical content as expressed in the hospital service must not be lost. The unuttered but insistent emphasis on the value of every life leaves an enduring impress, to the influence of which must be attributed the unceasing effort to create for each the best environment." In "The Nurse and the World" she pictures to the girls who are studying nursing that "its doors are open to all who need its services . . . whose contribution to future generations cannot be measured. . . . The essential thing is that each individual should find satisfaction in the chosen pursuit that ensures the best he has to give, devotion in its fullest sense . . . to insure, with understanding of the project, as a co-laborer not as a machine, the best that can be given."

The Experimental Study of Reading. By M. D. Vernon, M.A. Cloth. Price, $3. Pp. 190, with illustrations. New York: The Macmillan Company; London: Cambridge University Press, 1931.

Human beings vary greatly in their ability to read. Some read rapidly and absorb what they read; others read slowly and get little from their reading. This volume gives a concise account of the author's own experiments, particularly from the point of view of the action of the ocular tissues in the reading process. He discusses the movements of the eye and particularly the employment of such movements in reading, following this with a special study of the reading of children and finally of the relationship of typography to reading. In mature adult reading, regular and rhythmic backward and forward movements develop, later alternating with fixation pauses. These movements are habitual. The movements are interfered with by any species of mental struggle or conflict. Thus the ability to read rapidly may be learned and it is important to stress familiarity, interest and associated fact for competent reading.

The Social Life of Monkeys and Apes. By S. Zuckerman, Anatomist to the Zoological Society of London. Cloth. Price, $3.75. Pp. 356, with 24 illustrations. New York: Harcourt, Brace & Company, 1932.

Monkey society is based on dominance. The strongest monkey gets the most food, the strongest male gets the most wives. Monkeys apparently can learn, but the vast majority of their behavior is instinctive. The author, through many kinds of observations of apes and of monkeys both in captivity and wild, comes to the conclusion that the difference between the apes and man is the difference between physiology and culture. The work is extraordinarily interesting and reveals a basis for much human behavior that may be apelike but seems reasonable. The volume concludes with an excellent bibliography of more than 100 references, an index of monkey types, and an index of authors and subjects.

Equinococosis: Quistes hidatídicos. Por el Dr. D. Ricardo Lozano, catedrático de clínica quirúrgica de la Facultad de medicina de Zaragoza. Con la colaboración del Dr. D. Ricardo Lozano, Hijo, auxiliar de anatomía topográfica y operaciones en la Facultad de medicina de Zaragoza. Paper. Price, 8 pesetas. Pp. 153, with 12 illustrations. Madrid: Casa Editorial Bailly-Bailliere, S. A., 1931.

Echinococcus disease is endemic in Zaragoza as the result of its high incidence (from 20 to 30 per cent) in animals in the slaughter houses. Human infection is relatively frequent. Any organ of the body may be attacked, but hydatid cysts of the liver are the usual result. The authors emphasize a characteristic trembling of such echinococcus cysts, which persists for a short time after percussion. This is helpful in differentiating echinococcus from other diseases of the liver. The hydatid cysts in the liver are large solitary cysts with no compensatory hypertrophy of the uninvolved liver. Secondary infection, unaccompanied by septicemia, is a frequent complication of the cyst. The choice of treatment is marsupialization. Infection of the lungs occurs in about 8 per cent of human echinococcus infection. The right lung is more often affected than the left, and the authors suggest that this may result from direct extension from the liver. With more roentgenologic examinations, small foci clinically latent may be observed in the future. Of the organs more rarely involved, there is a great deal of interest attached to the thyroid gland: younger persons are more often attacked than older persons. This small volume is highly interesting and gives the reader a comprehensive review of echinococcus disease.

Rational Pharmaceutical Treatment of Common Skin Diseases. By Herman Goodman, B.S., M.D. Cloth. Price, $10. Pp. 350, with 72 illustrations. New York: Medical Lay Press, 1932.

Eleven groups include nearly three fifths of all the diagnoses made of patients with skin disease. As stated in an editorial in THE JOURNAL some years ago, every practitioner should become familiar with eczema, acne, scabies, psoriasis, seborrhea, impetigo, urticaria, dermatitis venenata, tinea, alopecia, pediculosis and pruritus. Dr. Goodman in this volume briefly considers the anatomy of the skin, methods of examination, bathing and diet and then discusses the treatment of the diseases of the skin according to the groups mentioned. The book is simply written and is planned particularly for the general practitioner. In view of the close relationship of allergy to disorders of the skin, the author includes a discussion of elimination diets not only for adults but also for children of various ages. The illustrations are printed on special stock; the text itself with large type and on good paper. There are numerous citations of useful prescriptions, so that the book is probably one of the most practical handbooks for general practitioners thus far made available.

Medicolegal

Liability for Roentgen Burn

(Casenburg v. Lewis (Tenn.), 40 S. W. (2d) 1038)

In 1918, Mrs. Lewis was operated on for the removal of an abdominal tumor. After the incision had been made, it was deemed inadvisable to remove the growth; according to one physician, because it was malignant, and according to another, because of adhesions to vital organs. The incision was closed, and after it had healed Mrs. Lewis was sent to the physician defendant for roentgen treatment. From the first treatment in 1918 up to some time prior to May 5, 1924, he administered 160 treatments, without injury. On May 5, 1924, the roentgen ray was again applied, in equal dosage to the abdomen and back, and a third degree burn of the abdomen followed, covering a space approximately 7 inches by 9 inches and extending "to the underlying abdominal membrane." Mrs. Lewis sued the physician defendant. She died, however, Jan. 14, 1926, and the cause was prosecuted by her administrator. The immediate cause of her death, it was testified, was appendicitis, superinduced by the roentgen burn. The burn made it impossible to operate, because the incision would have extended through the burned tissue, without possibility of healing.

At the first trial, the court directed a verdict for the physician defendant. On appeal by the plaintiff the court of appeals reversed the cause and remanded it for another trial, and the Supreme Court of Tennessee affirmed that action.[1] The second trial resulted in a judgment for the plaintiff. The court of appeals, however, reversed that judgment and again remanded the case to the trial court, because of the failure of that court to direct a verdict in favor of the physician defendant. The plaintiff a second time appealed to the Supreme Court of Tennessee, which then affirmed the judgment of the trial court in his favor, subject to a reduction in the amount of the judgment.

If the instrumentality that produces an injury, said the Supreme Court, is under the exclusive control of the defendant, and if an injury would not ordinarily result if due care is exercised, the doctrine of res ipsa loquitur applies and raises an inference of negligence on the part of the defendant. That inference becomes conclusive unless rebutted by countervailing evidence. When an effort is made to rebut this inference by opposing evidence, the weight of the inference as well as the weight of the explanatory evidence must be determined by the jury, unless uncontradicted explanatory evidence excludes the inference that the injury resulted from want of ordinary care. The trial court, therefore, rightly allowed this case to go to the jury.

At the trial, an undiscoverable idiosyncrasy on the part of the patient, superinduced by the cumulative effect of past treatments, producing endarteritis, was alleged by way of defense; also the negligent use of scarlet red on the itching surface of the abdomen. The physician defendant and other witnesses testified that the roentgen apparatus used was such as was in common use by other physicians, that it was properly used, and that the roentgen ray was applied properly in respect to both time and intensity in the course of the treatment of May 5, 1924, and of all other treatments. In the opinion of the physician defendant, the injury to the decedent was unavoidable.

A medical witness testified that third degree burns are unusual and attributed them to the following causes: (1) excessive dosage, caused by failure of the roentgenologist to use proper filterage, or by excessive exposure, or by increased intensity of the ray; (2) idiosyncrasy on the part of the patient; (3) failure of the operator to observe the patient so as to determine whether the cumulative effects of preceding treatments have approached the danger point. The court of appeals, said the Supreme Court, concluded that the physician defendant was confronted with the necessity of determining whether he should let his patient die of the malignant growth for which he had been treating her or continue the treatment to arrest the growth, and the court of appeals held that for the consequences of the exercise of his judgment in continuing the treatment after 160 antecedent treatments he was not liable. But, said the Supreme Court, while it is the physician's privilege to decide between one of two or more courses in the treatment of his patients, and while he cannot be held responsible for an erroneous exercise of his judgment, the rule is subject to the limitation that before exercising his judgment the physician must learn by proper examination the facts and circumstances on which a reasonable exercise of judgment may rest.

The defendant knew that he had administered 160 treatments. The cumulative effect of those treatments was or should have been known to him. He should have known, too, the means of ascertaining when an additional treatment would be hazardous to the patient. All physicians agreed in their testimony that the cumulative effect of the roentgen ray is ordinarily disclosed by dryness and pigmentation of the skin, thus enabling the roentgenologist to discover the danger of an additional treatment by superficial or surface symptoms. They agreed, too, that the cumulative effects of the roentgen ray are not always visible in endarteritis. It was testified that when endarteritis, or the blood change indicative of it, is not visible on the surface, the condition may be discovered by a blood count. It was testified further that without cumulative effects visible or ascertainable on reasonable examination, the roentgen-ray dosage, if properly administered, could not produce a third degree burn.

The physician defendant testified that when he administered the last treatment he examined the skin, both on the back and on the abdomen, and that there was no pigmentation or dryness, but it was in evidence that endarteritis would not be apparent to a roentgenologist through an examination of the skin. Superficial symptoms, it was shown, cannot always be relied on to reveal the danger that all experts agree may result from cumulative treatment. Hence the necessity for resort to additional methods of diagnosis, such as the blood count. The failure of the physician defendant in this case to resort to a blood count to determine whether danger existed was not a mere error of judgment; it was the omission to do what reasonable prudence would suggest, especially where the consequence of previous treatments might lead the roentgenologist reasonably to apprehend the danger of an additional treatment causing a third degree burn. After 160 roentgen treatments without injurious effect, the theory of idiosyncrasy on the part of the patient was incredible.

There was evidence that scarlet red was used on the patient's abdomen at some time after the last roentgen treatment. Physicians agreed that its use within a short time after the treatment would convert a first degree burn into a third degree burn, but they said that two weeks after the treatment the use of scarlet red would be harmless and might be beneficial. There was no evidence to show when or by whom the scarlet red was applied. Thirteen days after the treatment on May 5, a physician examined the burn and no scarlet red had been applied at that time. At his visit twenty-six days after the treatment referred to, he found that scarlet red had been applied. If scarlet red was applied, it must have been done after the danger of its use had passed.

All the explanatory evidence taken together does not destroy the weight of the inference of negligence, arising from the doctrine of res ipsa loquitur. The weight of the inference, as well as the weight of the explanatory evidence, was therefore a matter for determination by the jury.

1. Lewis v. Casenburg (Tenn.), 7 S. W. (2d) 808; J. A. M. A. 92: 1628 (May 11) 1929.

Society Proceedings

COMING MEETINGS

American Association for the Study of Goiter, Hamilton, Ontario, June 14-16. Dr. J. R. Yung, 670 Cherry St., Terre Haute, Ind., Secretary.

American Gynecological Society, Quebec, May 30-June 1. Dr. Otto H. Schwarz, 630 South Kingshighway, St. Louis, Secretary.

American Neurological Association, Atlantic City, June 6-8. Dr. Henry Alsop Riley, 117 East 72d Street, New York, Secretary.

American Ophthalmological Society, New London, Conn., June 27-29. Dr. Emory Hill, 501 East Franklin Street, Richmond, Va., Secretary.

American Orthopedic Association, Toronto, Canada, June 15-18. Dr. DeForest P. Willard, 1916 Spruce Street, Philadelphia, Secretary.

American Psychiatric Association, Philadelphia, May 30-June 3. Dr. Clarence O. Cheney, 722 West 168th Street, New York, Secretary.

American Urological Association, Toronto, May 30-June 2. Dr. Gilbert J. Thomas, 1009 Nicollet Avenue, Minneapolis, Secretary.

Conference of State and Provincial Health Authorities of North America, Washington, D. C., June 2-6. Dr. A. J. Chesley, State Board of Health, St. Paul, Minnesota, Secretary.

Maine Medical Association, Rangeley, June 16-18. Dr. Philip W. Davis, 22 Arsenal Street, Portland, Secretary.

Massachusetts Medical Society, Boston, June 8-10. Dr. Walter L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, San Francisco, June 20-22. Miss Marjorie J. Darrach, 645 Mullett Street, Detroit, Secretary.

Montana, Medical Association of, Miles City, July 13-14. Dr. E. G. Balsam, 208 North Broadway, Billings, Secretary.

National Tuberculosis Association, Colorado Springs, June 6-9. Dr. Charles J. Hatfield, 7th and Lombard Streets, Philadelphia, Secretary.

New Jersey, Medical Society of, Atlantic City, June 15-17. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.

North Dakota State Medical Association, Grand Forks, June 1-2. Dr. Albert W. Skelsey, 18 Broadway, Fargo, Secretary.

Pacific Northwest Medical Association, Spokane, Wash., June 27-29. Dr. Frederick Epplen, 1215 Fourth Avenue, Seattle, Secretary.

Rhode Island Medical Society, Providence, June 2. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

South Dakota State Medical Association, Watertown, June 20-22. Dr. John F. D. Cook, Langford, Secretary.

Western Branch of the American Urological Association, Portland, Ore., July 1-2. Dr. F. S. Dillingham, 548 S. Spring Street, Los Angeles, Secretary.

West Virginia State Medical Association, Parkersburg, June 21-23. Mr. J. W. Savage, Professional Building, Charleston, Executive Secretary.

Current Medical Literature

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Titles marked with an asterisk (*) are abstracted below.

American Journal of Clinical Pathology, Baltimore

2: 73-153 (March) 1932

*Rhinosporidium Seeberi in Nasal Polypus: Fourth North American Case. G. S. Graham, Birmingham, Ala.—p. 73.
*Glycosuria and Glycemic Tolerance Curve: Review. E. T. Herrmann, St. Paul.—p. 87.
Morphologic and Cultural Study of Staphylococci with Especial Reference to Source. L. Thompson, Rochester, Minn.—p. 125.
Modifications of Differential Stains with Especial Reference to Trichromic Stain of Cajal. R. Castroviejo, New York.—p. 135.

Rhinosporidium Seeberi in Nasal Polypus.—Graham reports a case of rhinosporidial infection in a nasal polypus. The patient was a Negro boy, aged 12 years, born in Georgia and resident since the age of 4 in a small coal-mining village in Alabama. The source of the infection is unknown, no other similar condition having been observed in the community for at least ten years. The case illustrates the remarkable discontinuity of the infection, of which more than forty known cases reported during the past thirty years have been observed in three widely separated localities, India, Argentina and the United States. Preoperative diagnosis should be made without particular difficulty through recognition of the characteristic spores in the nasal secretions.

Glycosuria and Glycemic Tolerance Curve.—Herrmann enumerates the more important diagnostic criteria to be considered in using the dextrose tolerance test, thus: The blood sugar should never be determined after fasting or a dextrose tolerance test done on any patient until that patient has been on an ordinary mixed diet, unrestricted as to carbohydrate intake, for some days or weeks. A reliable and accurate arterial method should be used, and within the first hour samples should be taken, preferably at ten, twenty and thirty minutes, since the peak of the rise for the most part occurs at these periods. The normal fasting blood sugar, both venous and arterial, should not exceed 0.11 Gm. per hundred cubic centimeters by any method used, except in people more than 40 years of age or in those having febrile diseases, anemia, cerebral hemorrhage or hyperthyroidism. The tolerance curve should be determined by using 1 Gm. of dextrose per kilogram of body weight after a twelve hour fast, the dextrose being given by mouth in a 10 per cent solution. Under these conditions in arterial blood the normal tolerance curve should not rise higher than 0.2 Gm. per hundred cubic centimeters and the curve should fall to 0.11 Gm. or below at the end of two hours. Threshold determinations should be made in any case in which the curve shows any abnormality in the presence of glycosuria, so that the type of glycosuria may be tentatively classified. A fasting blood sugar of more than 0.11 Gm. on any occasion is almost undoubtedly indicative of diabetes. One should not be satisfied with a single fasting sugar. In a doubtful case, repeated fasting sugar determinations should be done over a period of months. All persons showing a normal fasting sugar with a pronounced hyperglycemic curve of long duration should be suspected of diabetes and put under observation. In abnormal cases of doubtful origin the fermentation or phenylhydrazine test should be used in the determination of type for the excreted sugar. In addition one must (*a*) take a careful family history for possible glycosuria; (*b*) eliminate diseases, other than diabetes, that may cause disturbance of carbohydrate metabolism; (*c*) remember that long periods of observations, even up to forty years, seem to show that there is no transition in the same individual from nondiabetic glycosuria in any of five classes discussed by the author to true diabetes mellitus, and in cases without glycosuria, tolerance curves higher than normal do not necessarily indicate diabetes.

American J. Medical Sciences, Philadelphia

183: 301-444 (March) 1932

Medical Applications of Anticolibacillary Serum. H. Vincent, Paris, France.—p. 301.
*Infective Asthma: Indication of Its Allergic Nature. R. A. Cooke, New York.—p. 309.
Studies in Pulmonary Gas Absorption in Bronchial Obstruction: I. Two New Methods for Direct and Indirect Observation. P. N. Coryllos and G. L. Birnbaum, New York.—p. 317.
Id.: II. Behavior and Absorption Times of Oxygen, Carbon Dioxide, Nitrogen, Hydrogen, Helium, Ethylene, Nitrous Oxide, Ethyl Chloride, and Ether in Lung. P. N. Coryllos and G. L. Birnbaum, New York.—p. 326.
*Id.: III. Theory of Air Absorption in Atelectasis. P. N. Coryllos and G. L. Birnbaum, New York.—p. 347.
*Pathology of Rheumatic Pneumonia. B. A. Gouley and J. Eiman, Philadelphia.—p. 359.
*Abdominal Crises in Sickle Cell Anemia. F. E. Leivy and T. G. Schnabel, Philadelphia.—p. 381.
Unilateral Opacities in Chest Films. J. J. Singer, St. Louis.—p. 392.
Superficial Thrombophlebitis: New Cause of Chest Pain. W. B. Daniels, Washington, D. C.—p. 398.
Significance of Colloidal Gold Reaction as Diagnostic and Prognostic Aid in Neurosyphilis. F. G. Novy, Jr., Ann Arbor, Mich.—p. 401.
Chronic Adult Idiopathic Tetany: Report of Case. S. S. Leopold and L. Jonas, Philadelphia.—p. 418.

Infective Asthma.—Cooke believes that asthma of infective origin is subject to hereditary influence. This, of course, only proves that asthma, whether of the infective or the skin-sensitive type, is the offspring of hereditary influences. But the facts that 15 per cent of all asthmas are combined sensitization and infective types, that skin-sensitive allergies are frequent in the antecedents of infective asthma and that the opposite condition also obtains, all lend support to the view that the two types may be regarded as of the same nature. Eosinophilia may be regarded as an allergic phenomenon. Experimentally it is produced only under conditions that are regarded as favoring sensitization. Local eosinophilia of histogenous origin is believed to be shown. Eosinophilia is as frequent in asthma of infective origin as in that of the skin-sensitive type. Infective asthma may be regarded as an allergic reaction quite as properly as is the skin-sensitive type, although the immunologic reactions in the two forms are not identical.

Pulmonary Gas Absorption in Bronchial Obstruction.—Coryllos and Birnbaum have devised experimental methods which give evidence that, when a bronchus is completely obstructed, the entrapped alveolar air rapidly undergoes qualitative and quantitative changes as determined by successive gas analyses. Qualitatively, the percentages and partial pressures of the gases comprising the alveolar air tend to, but never quite, reach an equilibrium with the gases of venous blood. Quantitatively, the entrapped alveolar gases pass through the respiratory membrane into the blood circulating in the perialveolar capillaries until complete airlessness of the involved area is produced. The mechanism of production of atelectasis in the compressed lung (pneumothorax, pleural exudate, intrathoracic tumors, and so on) is exactly the same as in bronchial obstruction. Besides the gases of the air, diffusion of other gases was studied by introducing them into a lung previously rendered atelectatic. The different gases used in these experiments were: (1) active gases, oxygen and carbon dioxide; (2) neutral gases, hydrogen, nitrogen and helium, and (3) anesthetic gases or vapors, ether, ethyl chloride; nitrous oxide and ethylene. A new experimental method was devised which allows direct vision of the pulmonary changes occurring during the experiment. Nitrogen in the respiratory air plays the part of a "mechanical buffer," retarding the absorption of more diffusible and more soluble gases. This experimental work has allowed the formation of a theory on the mechanism of atelectasis based on the physiology of exchange of gases in the lung.

Pathology of Rheumatic Pneumonia.—Gouley and Eiman present nine cases of acute rheumatic fever with reference to the pathologic changes in the lungs. Eight of these showed an acute inflammation of lung tissue with consolidation; the ninth showed pleurisy with subacute lung involvement. All of them were associated with acute rheumatic heart disease. The inflammatory pulmonary reaction consisted of an interstitial

perivascular exudate of large endothelioid cells, identical in morphology with those found in rheumatic heart lesions and considered pathognomonic of rheumatic fever. Hemorrhage and fibrinous exudate were prominent features. The authors therefore consider that in many virulent cases a characteristic rheumatic pneumonia is to be found.

Abdominal Crises in Sickle Cell Anemia.—Leivy and Schnabel report three cases of sickle cell anemia to illustrate the critical abdominal attacks that may occur in this disease. Current explanations of such paroxysmal abdominal pains as found in the literature are discussed and other explanations not previously suggested are examined. None of these, whether old or new, are thought to explain adequately the abdominal crises under consideration. It is quite possible that a single explanation may not apply for all of the critical abdominal episodes as they occur in sickle cell anemia. On the basis of marked bony changes in the vertebrae of the authors' first case, they suggest root pains as a cause for the paroxysmal crises of pain and rigidity.

American Journal of Public Health, New York

22: 237-352 (March) 1932

*Study in Epidemiology of Diphtheria in Relation to Active Immunization of Certain Age Groups. E. S. Godfrey, Jr., Albany, N. Y.—p. 237.
Numbers of Bacteria in Frozen Food Stored at Several Temperatures. S. C. Prescott, Cambridge, Mass., and F. K. Bates and M. E. Highlands, Dayton, Ohio.—p. 257.
*Bacteriologic and Antigenic Analysis of Shigella Paradysenteriae Sonne Isolated from Nine Cases. H. Welch and F. L. Mickle, Hartford, Conn.—p. 263.
Health Facts: What to Tell. D. B. Armstrong, New York.—p. 271.
Incidence of Tuberculosis in Industrial Population. L. I. Dublin, New York.—p. 281.
What Is Health News? G. F. Wright, Montreal.—p. 292.
Intradermal Method of Virulence Testing of Corynebacterium Diphtheriae. J. R. Wells, St. Louis.—p. 308.

Epidemiology of Diphtheria.—According to Godfrey, the injection of from 50 to 70 per cent of children aged more than 5 years with three doses of toxin-antitoxin has failed in numerous instances to produce any marked effect on the diphtheria incidence of a community. The immunization of 30 per cent or more of children in the age group under 5 years in addition to more than 50 per cent of children aged from 5 to 9 years has in several instances produced an immediate and striking decline in the diphtheria rate of the community as a whole. The promptness of this seeming response suggests that a high degree of immunity is quickly acquired by a majority of those given three doses of toxin-antitoxin. It is a matter probably of a few weeks rather than of several months. In only two instances known to the author has a community that had attained 30 per cent immunization of the age group under 5 years suffered even a moderate epidemic. It is possible that immunization of the age group under 5 years should not be uniformly distributed through the community but should be largely concentrated in sections of highest prevalence if diphtheria is prevalent; if not, then in the congested areas. The study is presented as a working hypothesis, worthy of trial as a means of quickly ridding a community of epidemic diphtheria. More data from more varied sources are necessary to establish its validity. To this end, uniformity in the tabulation of immunization statistics is a necessity. The Committee on Administrative Practice and all health departments should adopt the standard age grouping in their tables, should classify immunizations by single years of age up to 10 years and should annually or oftener so tabulate their material as to show the present status. It is suggested that the unrecognized case rather than the healthy carrier is responsible for the occult infections occurring during epidemics or periods of high prevalence. It seems not improbable that many mild nasal cases would be discovered if diligently sought. Such cases are the ones most likely to spread infection. Finally, it should be clearly understood that this presentment is in no sense a plea for any community to stop work when it has attained a 30 per cent immunity. That figure may be much too low. Active immunization, like antitoxin, was introduced on a wholesale scale during a period when diphtheria was receding from a period of high epidemicity. It is the more difficult, therefore, to measure its effect. The immunity conferred may not suffice for an organism of greater invasiveness, virulence and pathogenicity. In any event, the only reasonably sure production for the individual is individual immunization.

Bacteriologic Analysis of Shigella Paradysenteriae Sonne.—Welch and Mickle report nine cases of diarrheal disease caused by Shigella paradysenteriae Sonne. A detailed, morphologic, physiologic and serologic study is presented. The American Type Collection Cultures Shigella paradysenteriae Sonne 31 and Metadysenteroides 4086 appear to be identical in their fermentative and serologic reactions. Shigella dispar 29 appears to be distinct from Shigella paradysenteriae Sonne in its serologic and fermentative characteristics. A serologic relationship between Shigella paradysenteriae Flexner and Shigella dispar is demonstrated by direct agglutination and by agglutinin absorption. Further emphasis is placed on the significance of Shigella paradysenteriae Sonne as a cause of diarrheal disease in this country.

American Review of Tuberculosis, Baltimore

25: 285-417 (March) 1932

Etiology of Tuberculosis. R. Koch, Berlin, Germany.—p. 285.
Abnormal Mental States in Tuberculosis. A. M. Forster and C. E. Shepard, Cragmor, Colo.—p. 324.
Tuberculous Infection in Mental Defectives as Estimated by Pirquet Tuberculin Test. A. N. Bronfenbrenner, Thiells, N. Y.—p. 334.
*Use of Metaphen-in-Oil in Pulmonary Cavitation. M. Jacobs, Eagleville, Pa.—p. 342.
*Use of Artificial Pneumothorax Apparatus During Thoracoplasty. C. Haight, New Haven, Conn.—p. 349.
Present Status of Skin Reaction in Tuberculous and Nontuberculous Subjects. E. S. Mariette and E. P. K. Fenger, Oak Terrace, Minn.—p. 357.
*Laboratory Tests for Tubercle Bacilli by Culture Methods. J. F. Norton, J. G. Thomas and Norma H. Broom, Detroit.—p. 378.
*Summary of Study of Types of Tubercle Bacilli Isolated from Human Lesions. R. M. Price, Toronto.—p. 383.
Dynamic Bronchial Tree. C. C. Macklin, London, Canada.—p. 393.

Metaphen-in-Oil in Pulmonary Cavitation.—Jacobs believes that collapse therapy and thoracoplasty constitute the only rational treatment in the management of pulmonary cavitation. In the far advanced and inoperable cases, external drainage should be encouraged. This can be accomplished by intrapulmonary medication with different drugs dissolved in oil, which should be followed by postural drainage. With this method, the expectoration is mechanically facilitated and reduced. The cough is diminished and the temperature, pulse and respiration are greatly improved. Thus far in the author's experience, metaphen-in-oil, 1:5,000 solution, has proved to be the best available agent. It has antiseptic properties, and it is nontoxic and nonirritating.

Use of Artificial Pneumothorax Apparatus During Thoracoplasty.—Haight reports a case of tuberculous empyema with pneumothorax, in which an increase in the intrapleural pressure during the second-stage thoracoplasty resulted in marked respiratory and circulatory embarrassment. Prompt lowering of the intrapleural pressure by withdrawal of air from the pleural cavity relieved the condition, which might otherwise have proved fatal. The routine use of the pneumothorax apparatus during thoracoplasty in cases of closed pneumothorax is suggested. By regulation of the intrapleural pressure during the operation, it is possible to obviate a shift of the mediastinum and consequent respiratory and circulatory embarrassment. Furthermore, on completion of the operation, an optimal collapse of the chest wall may be attained by decreasing the pneumothorax as desired or by abolishing it entirely.

Laboratory Tests for Tubercle Bacilli by Culture Methods.—Norton and his associates describe experiments whose results are in agreement with those of previous workers, who maintain the superiority of cultures over animals in identifying tubercle bacilli in material sent to the laboratory for examination. Culture methods produce more positive results, save expense, usually save time, and allow the bacteriologist to proceed at once with further tests if they are desired. Growths were obtained from 137 specimens in which tubercle bacilli were not found on direct examination, in the average time of thirty days, with a minimum of twelve and a maximum of seventy-seven days. No significance is attached to the slight differences found in the various groups of specimens. The use of not less than four tubes and two different mediums are recommended. In the authors' hands, the Petra-

gagni medium was somewhat superior to the modified Petroff medium employed.

Types of Tubercle Bacilli Isolated from Human Lesions.—Price reports that of 220 patients in the juvenile group suffering from some form of tuberculosis, 190 proved infected with the human type and thirty patients were infected with the bovine type of the tubercle bacillus. In the majority of instances in which the human type of the tubercle bacillus was isolated, there was a known history of contact with open pulmonary tuberculosis. Contact was usually close, the patient being exposed to tuberculous parents, grandparents, guardians, near relatives, and occasionally individuals sharing the home with the family. In some of the cases, two or more children in the family proved infected. Physical or roentgen examination or both showed evidence of tracheobronchial or pulmonary disease, the evidence pointing to the respiratory route of infection. In thirty cases in the series, the youngest an infant 5 months of age and the oldest a girl of 12 years, the infection was caused by the bovine type of the tubercle bacillus. Without exception, the children harboring an infection with the bovine tubercle bacillus have come from parts in the province of Ontario where pasteurization of milk was not carried out. The history invariably revealed the fact that the child had been fed on raw milk. It was possible on a number of occasions to demonstrate virulent tubercle bacilli in the milk consumed by the child and in the cattle responsible for the transmission of the disease to the human host and thus bring forward the indubitable evidence of the source of the childhood infection. On the basis of his observations, the author draws the following conclusions: 1. Bovine tuberculosis is an almost negligible factor in adult human infection. 2. The bovine tubercle bacillus is a factor of considerable importance in childhood tuberculosis. Thirteen and six-tenths per cent of nonpulmonary tuberculosis, leading to disablement, operation and necessitating prolonged and costly treatment, with doubtful results at the outcome, is caused by the bovine tubercle bacillus. 3. The disease is milk-borne. 4. Bovine tuberculosis is preventable and can be controlled by the effective pasteurization of milk. The truth of this statement is forcibly brought out in the fact that in the city of Toronto, where pasteurization of milk is compulsory and has been rigidly enforced since 1915, not a single case of bovine infection has been encountered in the group of children brought up on the pasteurized milk of the district (1915 to 1930).

Archives of Surgery, Chicago

24: 339-530 (March) 1932

*Irradiation of Mammary Cancer, with Especial Reference to Measured Tissue Dosage. B. J. Lee, G. T. Pack, Edith H. Quimby and F. W. Stewart, New York.—p. 339.
Diseases of Large Intestine. C. C. McClure, Cleveland.—p. 411.
*Operations on Superior Pole of Thyroid. C. A. Roeder, Omaha.—p. 426.
Rôle of Periosteum in Healing of Fractures: Experimental Study. K. O. Haldeman, San Francisco.—p. 440.
Anatomy of Gasserian Ganglion: Its Relation to Tic Douloureux. F. van Nouhuys, Leiden, Holland.—p. 451.
Breaking Strength of Healing Fractured Fibulas of Rats: II. Observations on Standard Diet. R. M. McKeown, M. K. Lindsay, S. C. Harvey and E. L. Howes, New Haven, Conn.—p. 458.
Fractures of Lower Radial Epiphysis. W. L. Watson, New York.—p. 492.
*Incidence of Nodules in Thyroid: Comparative Study of Symptomless Thyroid Glands Removed at Autopsy and Hyperfunctioning Goiters Operatively Removed. C. O. Rice, Minneapolis.—p. 505.
Review of Urologic Surgery. A. J. Scholl, Los Angeles; E. S. Judd, Rochester, Minn.; L. D. Keyser, Roanoke, Va.; Jean Verbrugge, Antwerp, Belgium; A. A. Kutzmann, Los Angeles, and A. B. Hepler, Seattle.—p. 516.

Irradiation of Mammary Cancer.—Lee and his associates state that preoperative external irradiation for mammary carcinoma is of value, as is proved by (1) the occasional regression of tumors so treated; (2) the histologic changes produced, and (3) the better clinical end-results. An efficient devitalizing dose cannot be delivered by external irradiation alone. To deliver an efficient dose one must use interstitial irradiation. The tissue dose delivered to the tumor should be measured and expressed in skin erythema units. This dose should be prescribed. Tables prepared in the physical department enable the clinician to translate into terms of skin erythema units the tissue dose delivered, whether by external or interstitial irradiation. The universal tissue dosage necessary to effect destruction of a radioresistant mammary cancer approximates twelve skin erythema doses. The safest procedure is to treat all patients with mammary cancers with the same sufficient dose, because (1) radiosensitivity cannot always be determined before operation, and (2) the same tumor may contain radioresistant and radiosensitive areas. Mammary cancers vary markedly with respect to radiosensitivity. The mammary gland will tolerate safely an enormous dose of interstitial irradiation. The possible menace of dissemination of the disease by the method of interstitial irradiation is considered. The authors have not seen evidence of such a dissemination in this series. Preliminary external irradiation lessens this possibility. All preoperative irradiation should be given within three weeks or less time. Six weeks should elapse following interstitial irradiation before radical amputation is performed. An interval of six weeks is necessary, because after this interval (1) the effects of irradiation are complete; (2) complete destruction of the tumor is accomplished, and (3) wound healing is unimpaired. The authors' present treatment for primary operable mammary cancer is external irradiation, then interstitial irradiation and finally radical amputation six weeks later. The axilla is irradiated by (1) preoperative roentgen rays or radium element pack, followed by (2) interstitial gold-filtered radon distributed along the lymph-node-bearing areas. The pathologic changes produced in mammary cancer by external irradiation are mainly due to vascular effects. There are moderate hydropic swelling of the tumor cells, moderate atrophic degeneration, marked collagen swelling, productive arteritis with thrombosis and calcific deposits in the vessel walls and productive fibrosis. The changes produced by interstitial irradiation are mainly direct effects on the tumor tissue, namely, ballooning degeneration, hydropic swelling, giant nuclei and atypical degenerative mitoses, a tendency toward squamous metaplasia followed by sloughing, hemorrhage, infiltration by fatty macrophages with ensuing extensive calcific deposits, often acute capillary necrosis with resultant tumor necrosis, squamous metaplasia of normal adjacent lobules in the breast, collagen swelling, productive fibrosis and late atrophy of the residual tumor.

Operations on Superior Pole of Thyroid.—Roeder enumerates thus the significant complications that may occur during the removal of the superior pole of a goitrous thyroid: (1) injuries to the inferior and superior laryngeal branches of the vagus, producing (*a*) partial or complete loss of voice, (*b*) obstruction to inspiration, (*c*) aspiration of ingested fluids into the bronchi, (*d*) loss of sensation to the mucosa of the larynx, and (*e*) referred pain to the lower portion of the pinna through the "vagopinna reflex"; (2) referred pain to the mandibular teeth through the "thyromandibular reflex"; (3) paralysis of the soft palate; (4) referred somatic pain through any or all of the first four cervical spinal sensory nerves; (5) hemorrhage from the superior thyroid vessels, and (6) injury to or removal of parathyroids.

Incidence of Nodules in Thyroid.—According to Rice, nodules occur as frequently in the postmortem thyroid that is assumed to be physiologically normal as in hyperfunctioning goiter operatively removed. The greater prevalence of colloid nodules in the postmortem thyroid may be due to the fact that differences in the degree of reversion, growth, differentiation and encapsulation have not been forced on the normal gland as strongly as they have in the toxic goiter. Multiple nodules are not found more frequently in hyperfunctioning goiters than they are in physiologically normal thyroids. Nodules are found in 56.95 per cent of the physiologically normal thyroids and in 57.14 per cent of the toxic goiters. Forty-two and eighty-five hundredths per cent of the toxic goiters have no nodules and are manifested as exophthalmic goiter. Thirty-five per cent of the thyroids that become hyperfunctioning can be classified as adenomatous goiter with hyperthyroidism. The remaining 22 per cent of glands contain nodules but manifest their hyperthyroidism as exophthalmic goiter. Diffuse hyperplastic goiter (exophthalmic goiter) occurs proportionately as frequently in glands with nodules as in glands without nodules. Lymphocytic foci are found more often in hyperfunctioning goiters than in normal thyroids. From these observations it appears that the presence of nodules in the thyroid is physiologically normal and that the incidence is not appreciably altered by the development of hyperthyroidism.

Indiana State Medical Society Journal, Fort Wayne

25: 107-156 (March) 1932

Endoscopy as an Aid in Diagnosis. D. O. Kearby, Indianapolis.—p. 107.
Gastro-Intestinal Diseases: General Phase: Intussusception. R. D. Caylor and T. E. Caylor, Bluffton.—p. 112.
*Id.: Medical Phase: Duodenitis and Motor Disorders of Duodenum. R. L. Sensenich, South Bend.—p. 117.
Id.: Surgical Phase: Abdominal Surgery in Infancy and Early Childhood. H. O. Bruggeman, Fort Wayne.—p. 123.
True Hypertrophic Ovary: New Theory for Cause of "Idiopathic Menorrhagia" and Abortion Habit. A. S. Jaeger, Indianapolis.—p. 127.

Gastro-Intestinal Diseases: Medical Phase.—According to Sensenich, disturbances of duodenal motility, with or without duodenitis, may give rise to symptoms simulating duodenal ulcer, gallbladder disease, chronic appendicitis or other gastro-intestinal disease. Impaired motility may be due to mechanical compression or distortion, local or general factors, or purely nervous causes. Delay in duodenal drainage and absorption of contents causes chronic intoxication, varying in intensity from mild malaise to seriously toxic and exhausted states. Characteristic clinical phenomena manifest in some types of this disorder are described. Some disturbances of duodenal motility are distinguishable only with great difficulty and will require the earnest cooperation of roentgenologist and internist to determine points of more definite identification. The author presents this subject in the hope that repeated discussion may awaken a greater interest among clinicians and lessen the possible confusion with other conditions, notably duodenal ulcer and gallbladder disease.

Journal of Biological Chemistry, Baltimore

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Purification of Benzidine, and an Improved Reagent for Estimating Hemoglobin in Blood. F. C. Bing, Cleveland.—p. 387.
Metabolism of Phospholipids: IV. Rate of Phospholipid Metabolism, with Especial Reference to Question of Intermediary Rôle of Phospholipids in Fat Metabolism. R. G. Sinclair, Rochester, N. Y.—p. 393.
Glycogenesis from Glucose Administered to Fasting Dog. Margaret Dann and W. H. Chambers, New York.—p. 413.
Effect of Urea Ingestion on Nitrogen Partition of Urine at Endogenous Nitrogen Level. R. A. Kocher and H. C. Torbert, Carmel-by-the-Sea, Calif.—p. 427.
Studies on Calcium Content of Human Blood Corpuscles. M. R. Rymer and R. C. Lewis, Denver.—p. 441.
Relationships Between Structure of Organic Compounds and Their Inhibiting Effect on Liver Esterase: Resemblance to Lyotropic Series of Anions. D. Glick and C. G. King, Pittsburgh.—p. 477.
Anserine in Mammalian Skeletal Muscle. W. A. Wolff and D. W. Wilson, Philadelphia.—p. 495.
Composition of Gallstones and Their Solubility in Dog Bile. M. Pickens, G. O. Spanner and L. Bauman, New York.—p. 505.
Manometric Analysis of Gas Mixtures: III. Manometric Determination of Carbon Dioxide Tension and pH$_s$ of Blood. D. D. van Slyke, J. Sendroy, Jr., and Shih Hao Liu, New York.—p. 547.
Method for Microgravimetric Determination of Silica in Tissue. J. C. Morgan and E. J. King, Toronto.—p. 613.
Studies on Blood Glycolysis: I. Effect of Arsenate. S. Morgulis and S. Pinto, Omaha.—p. 621.
Diet and Blood Lipids. W. R. Bloor, Rochester, N. Y.—p. 633.
Microcolorimetric Studies: III. Estimation of Organically Bound Phosphorus: System of Analysis of Phosphorus Compounds in Blood. T. Kuttner and L. Lichtenstein, New York.—p. 661.
Inorganic Composition of Parotid Saliva of Dog and Its Relation to Composition of Serum. E. J. de Beer and D. W. Wilson, Philadelphia.—p. 671.
Irradiated Milk: Amount of Vitamin D and Its Rate of Formation. G. C. Supplee and Zaida M. Hanford, New York, and M. J. Dorcas and H. H. Beck, Cleveland.—p. 687.
Recovery Process After Exercise in Mammal: II. Conversion of Infused *d*-Lactic Acid into Muscle Glycogen. C. N. H. Long and F. L. Horsfall, Jr., Montreal.—p. 715.
Effect of Adrenalin on Free Muscle Sugar and Total Carbohydrate. F. Bischoff and M. Louisa Long, Santa Barbara, Calif.—p. 743.

Journal of General Physiology, Baltimore

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Heat Inactivation of Antistaphylococcus Bacteriophage. A. P. Krueger, San Francisco.—p. 363.
Intermittent Stimulation by Light: I. Validity of Talbot's Law for Mya. S. Hecht and E. Wolf, New York.—p. 369.
Separation of Reactions in Photosynthesis by Means of Intermittent Light. R. Emerson and W. Arnold, Pasadena, Calif.—p. 391.
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Mobility of Gelatinate Ion. A. L. Ferguson and A. W. Schluchter, Ann Arbor, Mich.—p. 477.

Journal of Preventive Medicine, Chicago

6: 1-86 (Jan.) 1932

*Studies of Acute Respiratory Infections: III. Filter-Passing Anaerobic Bacteria of Nose and Throat in Health and in Colds. W. C. Noble, Jr., and D. H. Brainard, New York.—p. 1.
Superinfection of Cats with Taenia Taeniaeformis. H. M. Miller, Jr., St. Louis.—p. 17.
*Persistence of Acquired Immunity to Cysticercus Fasciolaris After Removal of Worms. H. M. Miller, Jr., and E. Massie, St. Louis.—p. 31.
Further Studies on Immunity to Metazoan Parasite, Cysticercus Fasciolaris. H. M. Miller, Jr., St. Louis.—p. 37.
*Passage of Poliomyelitis Virus Through Intestinal Tract. P. F. Clark, D. J. Roberts and W. S. Preston, Jr., Madison, Wis.—p. 47.
Vital Statistics in Development of Neighborhood Health Centers in New York City. G. J. Drolet and L. Weiner, New York.—p. 59.

Acute Respiratory Infections.—Noble and Brainard studied the anaerobic bacteria found in the filtered nose and throat washings of fourteen persons with colds, and eleven normal persons. The ordinary aerobic flora, which may grow anaerobically and obscure some of the more slowly growing anaerobes, was removed by using Berkefeld filters of the coarser grades. This procedure also removed anaerobic gram-negative cocci of the gazogenes type, which were found previously to be normal flora. Many anaerobic bacteria were isolated from the filtrates. Most of these were gram-negative, but there were a few gram-positive forms. The authors studied 114 strains, 73 being grouped tentatively according to their agglutinative reactions. The gram-positive flora, isolated from one patient with acute catarrhal coryza, consisted of two strains of bacilli, identical culturally and agglutinatively, and one strain of cocci. The gram-negative flora was much more numerous, a search disclosing minute cocci and bacilli of different sizes and forms. The cocci were similar culturally, but of four groups agglutinatively. The bacilli were even more heterogeneous, falling into several cultural and agglutinative groups; all were distinct from Bacterium pneumosintes, which could not be found. These groups were distributed with approximately equal frequency among both normal control subjects and persons with colds. As to the significance of these observations, the fewness of strains of the gram-positive group and their demonstration in only one subject would weigh against their primary etiologic relationship. The almost universal occurrence of the gram-negative cocci and their innocuousness when injected into rabbits would indicate that they are normal saprophytic flora. The heterogeneity of the gram-negative bacilli, the approximately equal distribution of their groups among normal subjects and persons with colds, and the absence of epidemic strains would make it unreasonable to assign a causative rôle to any one of these organisms, even though it is apparent that pathogens exist among them.

Persistence of Immunity to Cysticercus Fasciolaris After Removal of Worms.—Miller and Massie report that the acquired immunity conferred on the albino rat by an infection with Cysticercus fasciolaris was not lost in twenty-four individuals from which the worms were removed. An interval of from thirty-three to sixty days was allowed between removal of the cysticerci and infection. The onchospheres fed at that time resulted in an average of seventy-seven larvae, living and dead, in the control rats, whereas development was completely inhibited in the rats from which the worms of the initial infection had been removed.

Passage of Poliomyelitis Virus Through Intestinal Tract.—Clark and his associates failed to produce poliomyelitis in Macacus cynomolgus monkeys by the oral administration of large quantities of virus or by the injection of 10 cc. of virus into a loop of the small intestine. Infective quantities of virus were demonstrated in the feces (from 1.5 to 3.5 Gm.) from monkeys that had been infected in various ways. 1. The fecal concentrate from two monkeys that had been injected with 10 cc. of active brain cord suspension in a loop of the small intestine was injected into two other monkeys, both of which developed poliomyelitis. 2. Similarly, infection resulted from the feces of monkeys that had been fed on active brain cord suspensions or filtrates for a period of several days. Two experiments of this type were carried out. In the first, two animals were fed and fecal concentrate from these was injected into two monkeys, both of which developed poliomyelitis. The second experiment was similar, but with a negative result. 3. Two monkeys were

fed large doses of active filtrates for one day. Fecal concentrate from them was injected into two other monkeys. One of the latter came down with typical poliomyelitis, while the other did not. The animal giving the negative result had been used previously, although without symptoms. 4. Typical poliomyelitis developed in two monkeys injected with the dialyzed concentrate of the feces of two other monkeys that had been fed, for one day, with doses of virus concentrated by distillation in vacuo and subsequent dialysis. Attempts to demonstrate the virus in the feces of animals suffering from the disease proved futile.

Journal of Urology, Baltimore

27: 279-370 (March) 1932

*Pathogenesis of Hydronephrosis. C. M. Johnson, San Francisco.—p. 279.
*Carbuncle of Kidney (Metastatic Staphylococcus Abscess of Kidney Cortex). L. Brady, Baltimore.—p. 295.
Sarcoma of Adult Kidney. L. Herman and L. B. Greene, Philadelphia.—p. 317.
Study of Pyridium as a Urinary Antiseptic with Especial Reference to Its Elimination by Kidneys. P. J. Riaboff, Philadelphia.—p. 329.
Multilocular Cyst of Prostate. D. R. Melen, Rochester, N. Y.—p. 343.
Teratoma Testis with Embryonal Carcinoma: Case Report (Brief Clinical and Detailed Pathologic Report). G. H. Romberg, Baltimore.—p. 351.
*Surgical Problem of Epididymitis and Vasitis. B. W. Turner, Houston, Texas.—p. 359.

Pathogenesis of Hydronephrosis.—In order to determine the exact changes that occur in the renal tubules in progressive hydronephrosis, Johnson attempted their actual dissection. He found that dilatation begins at the glomerulus and proceeds quickly and evenly to the papillary ducts by the end of two or three weeks. By the end of one month there is beginning atrophy in the glomerulus and proximal convoluted tubules, with some dilatation still present in the distal convoluted tubules and collecting tubules. From this point on there is progressive atrophy of the glomeruli and convoluted tubules and progressive dilatation of the collecting tubules in the medulla. In other words, there is atrophy above the corticomedullary line where the arcuate vessels exist and dilatation below. By the end of three months some glomeruli may be directly in communication with collecting tubules, as a result of the shortening, straightening and finally disappearance of the convoluted tubules. Others never reach this stage but undergo atrophy and lose their communication with the collecting tubules entirely by four or five months. Maximum dilatation of the remaining collecting tubules in the medulla is reached at five months. Gradual atrophy and shrinkage in all dimensions then take place.

Carbuncle of Kidney.—Brady states that, when the diagnosis of carbuncle of the kidney has been made, prompt operation is indicated. However, if the patient's condition does not contraindicate it, a differential phenolsulphonphthalein test should be carried out, as it may be a great aid to the surgeon in deciding whether or not to remove the involved kidney. A low phenolsulphonphthalein reading for the uninvolved kidney indicates that the surgeon should, if possible, save the kidney containing the carbuncle. A low phenolsulphonphthalein output from the kidney containing the carbuncle does not necessarily mean that this kidney has been irreparably damaged and must be removed, for in a number of instances after the carbuncle has been drained the function of the kidney has returned to normal. The size of the lesion does not in itself decide the proper operative procedure unless at operation a very large part of the kidney is found to be involved by the carbuncle. However, as was true in a case reported by the author, the carbuncle may be so large that excision of the portion of the kidney containing it is not feasible, and if the operator intends to be conservative he can do no more than incise and drain the carbuncle. It is probably a good rule never to perform a nephrectomy except under one or two conditions: 1. If the general infection is so overwhelming that it is absolutely imperative to remove as much of the infected tissue as possible, a nephrectomy is indicated. For instance, if the patient is having chills, a high fever and is showing signs of septicemia, his best chance of overwhelming the infection probably lies in removal of the kidney. 2. If a patient has good renal function in the uninvolved kidney and is in poor general condition either through advanced age or through other pathologic conditions in addition to the renal carbuncle, it is wise to remove the kidney so as to shorten the convalescence as much as possible.

Surgical Problem of Epididymitis and Vasitis.—Turner believes that the Hagner operation and its various modifications for epididymitis is not sufficient to cope with all types of the disease that are encountered because its surgical principles are not extensive enough to relieve them. All other methods are palliative and allow too many cases of epididymitis to go on to destruction of the function of the testis by sclerosis of the epididymis, nodule in the vas or funicle adhesion with vasitis, perivasitis and obliterative seminal vesiculitis. The operation for panepididymitis aiding drainage to all parts as described by the author offers a remedy for most cases heretofore considered hopeless without radical surgical removal. Bold incision through the longitudinal axis of the fibrous epididymis with incased drainage, combined, when indicated, with excision of a nodule in the vas and silkworm-catgut end-to-end repair, supplants the previous elaborate epididymis-vas anastomosis for sterility in most instances.

Kansas Medical Society Journal, Topeka

33: 75-110 (March) 1932

Some Anatomic Studies in Oblique Inguinal Hernia. L. V. Hill, Kansas City.—p. 75.
Public Health Organization and Medical Profession. A. J. McLaughlin, Chicago.—p. 77.
Epidemiology of 1930 Poliomyelitis Epidemic in Kansas. E. G. Brown, Topeka.—p. 81.
Treatment of Poliomyelitis. W. C. Menninger, Topeka.—p. 85.

Medical Journal and Record, New York

135: 261-312 (March 16) 1932

Traumatic Neuroses in Industrial Workers. A. W. Hammer, Philadelphia.—p. 261.
Comparison of Precipitation Test with Complement Fixation Test in Serum Diagnosis of Syphilis: Based on Two Thousand One Hundred and Forty Tests. J. W. Smith, Jr., Fort Schafter, Hawaii.—p. 263.
Serum Sickness: Dangers of Serum Therapy Following Toxin-Antitoxin Immunization: Twofold Reaction. A. I. Goldschlager, Islip, N. Y.—p. 265.
Vitamins: Their Rôle in Prevention and Treatment of Disease. H. F. Langhorst, Elmhurst, Ill.—p. 266.
Successful Treatment of Tuberculous Adenitis with Protein Mineral Combination (Protein-Calcium Phosphate, Milk Minerals, Lactose). O. B. Wanshenk and M. L. Furman, New York.—p. 270.
Corrective Treatment of Hernia: Observations from Thirty Years of Experience in Injection Method. I. Mayer, Detroit.—p. 275.

Nebraska State Medical Journal, Lincoln

17: 93-132 (March) 1932

Some Aspects of Physiology of Bone. C. A. Dragstedt, Chicago.—p. 93.
Mantoux Observations in Five Hundred and Twenty Indian Children. H. Davis, Genoa.—p. 98.
Etiology and Mechanics of Massive Atelectasis. E. Korol, Lincoln.—p. 101.
Obstruction of Small Intestine Due to Benign Granuloma. C. Andrews, Lincoln.—p. 106.
Management of Child with Defective Heart. H. M. Jahr, Omaha.—p. 109.
Health Program in Public Schools. Elizabeth Ash Langfeld, Omaha.—p. 113.
Principles Underlying Reduction of Pain in Postoperative Phase of Anorectal Diseases. R. R. Best, Omaha.—p. 115.

New England Journal of Medicine, Boston

206: 545-600 (March 17) 1932

*Limitation of Electrocardiogram as an Aid in Diagnosis of Coronary Occlusion. C. W. Holland, Halifax, Nova Scotia, and S. A. Levine, Boston.—p. 545.
*Chronic Ulcerative Colitis. E. D. Kiefer, Boston.—p. 552.
Mortality and Expectation of Life in Mental Deficiency in Massachusetts: Analysis of the Fourteen-Year Period 1917-1930. N. A. Dayton, C. R. Doering, Margaret M. Hilferty, Helen C. Maher and Helen H. Dolan, Boston.—p. 555.
Arguments in Favor of Compulsory Vaccination for Private School Children. S. B. Woodward, Worcester, Mass.—p. 570.

Electrocardiogram in Diagnosis of Coronary Occlusion.—In a study of 328 cases of coronary occlusion in which the electrocardiograms were taken, Holland and Levine found there were thirty-five that showed essentially normal tracings at one time or another following the onset of the attack. For the purpose of the study, curves were regarded as essentially normal if they lacked the following changes: alterations in the T wave that are generally regarded as occurring with acute coronary occlusion (high take off, convexity and sharp dipping of the T wave), low amplitude, disturbances of auriculoventricular conduction and spreading of the Q-R-S complex. Because tracings were not taken with the same frequency or at fixed

time intervals, it was impossible to draw any statistical conclusions, except of a vague nature. In most cases several curves were made in the first week or two; in a small number the only ones obtained were made months after the attack. In six cases, so-called normal electrocardiograms were obtained from a few hours to seven days after the onset of the attack. In all these, subsequent tracings showed characteristic alterations in the ventricular complexes. In twenty cases, typical changes in the tracings taken soon after the onset of the attack were replaced by "normal" curves at some subsequent time. The return to normal varied greatly, coming as quickly as four days after the onset of the attack in one case and more gradually and requiring several months in another. In nine cases the only electrocardiograms obtained were normal. In only one of these nine cases were curves obtained within the first ten days. Of the entire series of 328 cases there were only eight in which "normal" electrocardiograms were obtained at any time during the first ten days. On the basis of their observations the authors conclude that, regardless of the time elapsing after an attack, a normal electrocardiogram in a case considered clinically as coronary occlusion does not exclude the diagnosis. A most important feature in this problem is the marked changes in the electrocardiogram that occur from day to day, especially during the first two weeks. By taking repeated tracings, therefore, normal curves may be found later to change to those more characteristic of coronary artery disease.

Chronic Ulcerative Colitis.—Kiefer reports his experiences with twenty-five cases of chronic ulcerative colitis. He believes that the proctoscopic and sigmoidoscopic examination is the most important diagnostic procedure. The etiology is unsettled, but the possible importance of amebic infections is discussed. Treatment consists of a suitable diet, antiamebic drugs, antispasmodics, supportive measures, treatment for the secondary anemia, blood transfusions and ileostomy. Ileostomy is the operation of choice because it puts the bowel at complete rest. The operation is important as a life-saving measure in severe cases but does not stop the local destruction in the intestinal wall. The therapeutic results with antiamebic treatment have been sufficiently favorable to lend importance to the possibility of a primary amebic infection.

New Jersey Medical Society Journal, Orange

29: 101-188 (Feb.) 1932

Observations of Governor's Conference on Child Health and Protection. F. C. Johnson, New Brunswick.—p. 101.
Sinus Disease in Children. E. L. Wood, Newark.—p. 103.
Accessory Nasal Sinus Infections in Children. G. W. Strickland, Roselle.—p. 108.
Credulity of Rhinologists Anent Sinuses. C. S. McGivern, Atlantic City.—p. 111.
Bladder and Prostatic Carcinoma. B. S. Barringer, New York.—p. 115.
Mediastinal Tumors: Report of Three Cases. A. Strelinger, Elizabeth.—p. 122.
Medicolegal Aspects of Soft Tissue Injury. M. Kummel, Newark.—p. 127.
Matter of Reducing and Gaining Weight. H. S. Read, Atlantic City.—p. 132.
Rôle of General Practitioner in Conservation of Vision. E. S. Sherman, Newark.—p. 134.
Electrocardiograms of Mental Patients. L. Levin, Trenton.—p. 140.
Medical Aspects of Workman's Compensation Act. M. S. Avidan, Newark.—p. 143.
Maggots and Other Insects in Medicine. H. I. Goldstein, Camden.—p. 145.

New York State Journal of Medicine, New York

32: 309-374 (March 15) 1932

Health Instruction the Best Social Insurance. R. L. Wilbur, Washington, D. C.—p. 309.
Medical Research. F. G. Banting, Toronto.—p. 311.
Diagnosis and Treatment of Syphilis: Viewpoint of the General Practitioner. A. B. Cannon, New York.—p. 316.
*Control and Management of Cardiopathic Child. E. L. Benjamin, New York.—p. 325.
Dilatation and Its Interpretation. P. T. Harper, Albany.—p. 328.
Medical Practice Act: Five Years' Results. H. Rypins, Albany.—p. 334.
Lumbar Hernia with Ovarian Cysts. J. Sarnoff, Brooklyn.—p. 337.
Urinary Retention from Vaginal Occlusion: Two Cases. J. A. Lazarus, New York.—p. 339.
Recorded and Resident Death Rates in New York State. J. V. de Porte, Albany.—p. 341.

Management of Cardiopathic Child.—Benjamin emphasizes the fact that the cardiopathic child is a type that requires special attention, study and supervision. Employment of measures to improve the general health and eliminating all foci of infection, especially in the upper respiratory tract, tends to protect the heart from further damage, prevents recurrent infections and aids in the progressive improvement of the child. Too much restriction on some children converts them into neuropaths and encourages a low morale, and too little restriction on others tends to further extension of the lesion present and increases the tendency to frequent exacerbations. In comparison to the manner in which the author treated these cases prior to the advent of a better understanding of this type of child, he now gives them a better chance in life and a better outlook through attempt at regulation and management of their lives. However, a more thorough, effective and ideal control and management of them can be possible only through the establishment of a cardiac colony—including a school—where the daily routine of these children can be observed and an intensive study of the child, his habits, characteristics, temperament and physical condition, properly evaluated. The investment would be sound, and the result a community of self-sustaining and healthier children as a dividend, and from the standpoint of preventive medicine an opportunity to formulate proper and definite rules of prophylaxis by correlating all the facts and thus reducing the incidence of rheumatism among children.

Oklahoma State Medical Assn. Journal, Muskogee

25: 95-136 (March) 1932

Roentgenologic Aspect of Duodenal Ulcer. J. E. Heatley, Oklahoma City.—p. 95.
Cancer Problem. A. L. Blesh, Oklahoma City.—p. 97.
Anemia: Clinical Lecture. W. Langston, Oklahoma City.—p. 100.
Gallstone Ileus. C. S. Neer, Vinita.—p. 105.
Geriatrics. J. T. Martin, Oklahoma City.—p. 107.
Examination of the Urologic Patient. A. R. Sugg, Ada.—p. 110.
Dice Removed from Child's Bronchus on Friday the Thirteenth. R. N. Smith, Tulsa.—p. 115.
Achondroplasia. F. E. Dill, Oklahoma City.—p. 117.
Fractures of Elbow in Childhood. W. H. Bailey, Oklahoma City.—p. 119.

Pennsylvania Medical Journal, Harrisburg

35: 347-436 (March) 1932

Contemporary Fads and Fallacies, Therapeutic and Diagnostic, Which Reflect Dangerous Professional Credulity. S. R. Miller, Baltimore.—p. 347.
How to Diminish Deaths from Cancer in Pennsylvania. W. A. Lell, Philadelphia.—p. 354.
Gallbladder: Recent Advances as Applied to Treatment. I. S. Ravdin and C. G. Johnston, Philadelphia.—p. 357.
*Remarks on Etiology and Treatment of Cholecystitis. J. P. Griffith and H. A. Kipp, Pittsburgh.—p. 362.
Diffuse Gastric Hemorrhage. E. L. Bortz, Philadelphia.—p. 367.
Gastric Hemorrhage from Surgical Standpoint. D. B. Pfeiffer, Philadelphia.—p. 370.
Medical Conditions Simulating Surgical Conditions of Upper Abdomen. F. J. Kalteyer, Philadelphia.—p. 373.
Treatment of Postoperative Obstruction. D. Guthrie, Sayre.—p. 376.
Etiology, Diagnosis and Treatment of Peptic Ulcer. J. M. T. Finney, Baltimore.—p. 380.
*Focal Infection in Early Childhood: As Seen by Otolaryngologist. G. M. Coates, Philadelphia.—p. 389.
Id.: From Standpoint of Dentist. W. A. Jaquette, Philadelphia.—p. 392.
Pediatrist's Study of Focal Infection in Children. E. W. Stitzel, Altoona.—p. 395.

Etiology and Treatment of Cholecystitis.—Griffith and Kipp believe that cholecystitis is an indication of infection of the biliary duct system and its lymphatics. The removal of the gallbladder is an important but occasionally incomplete operation for the cure of symptoms interpreted as cholecystitis. The drainage of the bile ducts by the introduction of a tube through the cystic duct into the common duct is the method of choice. There is no greater risk incurred in drainage of bile ducts following cholecystectomy than with cholecystectomy alone. In some cases the drainage of the ducts is of the greater importance.

Focal Infection in Early Childhood.—According to Coates, each mucous lined cavity, bony or otherwise, of the head, is a potential focus either directly or indirectly, and in searching for such a focus, patience, skill and mechanical and laboratory aids are essential. No portion must be overlooked, and roentgenologic aid is usually necessary although not to be absolutely relied on. Slight changes in the drum membrane in color, light reflection or position, and slight drooping of the posterosuperior canal wall may be the only indications of a

virulent middle ear or mastoid infection. Slight differences in transillumination of the sinuses, changes in the color or appearance of the nasal mucosa, the observation of even small quantities of pus or mucopus in the middle or superior meatuses, after the application of negative pressure, or in the choanae and dropping behind the palate, slight bogginess of the turbinates, or the cytologic and bacteriologic study of maxillary sinus washings, may give the clue that leads to the discovery of a chronic, almost symptomless sinus infection. Every part of the pharynx and fauces should be examined with care. It is not enough to know that a tonsil operation has been performed. The fossae must be examined for stumps, tags, regrowths, small crypts concealed behind the pillars or beneath scar tissue, compensatory hypertrophies of the lateral pharyngeal folds, and isolated lymphatic masses in the posterior pharyngeal wall containing crypts filled with presumably infectious material, infected adenoid remnants, often surprisingly large, and the commonly overlooked lingual tonsil and infratonsillar lymph nodes, which were shown by French, years ago, to be not uncommon foci of infection. These tissues may all be primarily infected, cause acute infection of the accessory sinuses, and prolong chronic infections of these cavities. These tissues are frequently infected secondarily by sinus drainage, causing, in their turn, focal infection, either toxic or actual, elsewhere. Laryngitis, tracheobronchitis and other infections of the lower respiratory tract are often caused by gravity extension of infected secretions from these higher areas, as well as by direct extension downward of inflamed mucosa. Efficient treatment of the nose and throat not uncommonly results in a cure of an intractable case. Some allergic conditions have their origin in the sinuses and the throat. Many disorders of the kidneys, the joints, both acute and chronic, the gastro-intestinal tract, the eyes, the heart, the blood and the glandular system are due to focal infection, no matter how the latter may be defined, and it seems safe to say that by far the majority of these infections may originate in the upper respiratory tract.

Philippine Journal of Science, Manila

47: 197-304 (Feb.) 1932. Partial Index

Studies on Early Leprosy in Children of Lepers: II. Reexamination of Cases After Five Years. J. Rodriquez, Cebu, Cebu.—p. 245.
New Species of Hookworm from Philippine Civet. B. G. Chitwood, Washington, D. C.—p. 259.

Physical Therapeutics, Elmira, N. Y.

50: 41-80 (Feb.) 1932

Further Observations on Use of Infra-Red Rays in Cases of Pylorospasm. C. E. Brush, Nashville, Tenn.—p. 41.
Practical Suggestions for the Bath. C. Pope, Louisville, Ky.—p. 51.
New Apparatus and Procedures in Physical Therapy. F. F. de Courmelles.—p. 57.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

40: 105-160 (March) 1932

Diagnosis and Surgical Treatment of Cysts of Thyroglossal Duct. F. W. Rankin and N. W. Crisp, Rochester, Minn.—p. 105.
Indications for Open Reduction of Fractures. F. Christopher, Evanston, Ill.—p. 110.
Treatment of Complicated Fractures of Humerus Involving the Shoulder Joint. E. L. Gilcreest, San Francisco.—p. 124.
Developmental Anatomy and Surgical Significance of Orbicularis Oris. T. F. Mullen, San Francisco.—p. 134.
Surgical Problems of Thyroid. A. S. Jackson, Madison, Wis.—p. 142.

Yale Journal of Biology & Medicine, New Haven

4: 369-648 (March) 1932

Some Phases of Growth of Physiologic Chemistry in America. R. H. Chittenden, New Haven, Conn.—p. 371.
Surface-Area Constant in Comparative Physiology. F. G. Benedict, Boston.—p. 385.
Gastric Digestion; Survey. H. C. Bradley, Madison, Wis.—p. 399.
Some Trends in Current Researches on Vitamin B Complex. G. R. Cowgill, New Haven, Conn.—p. 419.
*Applications of Physiology of Respiration to Resuscitation from Asphyxia and Drowning and to Prevention and Treatment of Secondary Pneumonia. Y. Henderson, New Haven, Conn.—p. 429.
Cystinuria: Review of Some Recent Investigations. H. B. Lewis, Ann Arbor, Mich.—p. 437.
*Nutritive Aspects of Human Milk. Icie G. Macy, Detroit.—p. 451.
Creatine and Creatinine. V. C. Myers, Cleveland.—p. 467.
Brief Survey of Group of Acid-Producing and Acid-Tolerating Bacteria Known as Lactobacillus Genus. L. F. Rettger, New Haven, Conn.—p. 485.
Nutritional Significance of Some Mineral Elements Occurring as Traces in Animal Body. Mary Swartz Rose, New York.—p. 499.
Amino-Acids in Nutrition. W. C. Rose, Urbana, Ill.—p. 519.
Respiration at High Altitudes. E. C. Schneider, Middletown, Conn.—p. 537.
Some Biochemical Aspects of Growth. A. H. Smith, New Haven, Conn.—p. 551.
Review of Certain Researches Relating to Occurrence and Chemical Nature of Vitamin A. H. Steenbock, Madison, Wis.—p. 563.
Certain Aspects of Water Metabolism. F. P. Underhill, New Haven, Conn.—p. 579.
Recent Contributions to Theory of Protein Structure. H. B. Vickery, New Haven, Conn.—p. 595.
*Chemotherapy of Tuberculosis. H. G. Wells, Chicago.—p. 611.
Nitrogenous Muscle Extractives. D. W. Wilson, Philadelphia.—p. 627.

Applications of Physiology of Respiration to Resuscitation.—Henderson calls attention to the fact that ten years ago he and Haggard introduced the inhalation of a mixture of oxygen and carbon dioxide as a means of resuscitating the victims of carbon monoxide asphyxia and of removing ether and other anesthetics from the lungs after surgical operations. Many thousands of inhalators are now in use in the cities of the United States, especially by the rescue crews of the fire and police departments and of city gas and electric companies. Hundreds of lives are saved by these crews with their inhalators each year. In surgical operating rooms also, the use of carbon dioxide as a stimulant to respiration and the circulation has largely displaced the generally ineffective, and sometimes harmful, hypodermic and intravenous injection of drugs. These matters are based on the modern principles of the physiology of respiration and, confirmed by wide practical experience, are now established and accepted. Within the past three or four years, two other fields for the application of the same general type of treatment have developed and a third field seems now to offer tempting possibilities. These three fields are, first, resuscitation of the new-born who fail to breathe spontaneously or effectively, and prevention of pneumonia in those whose lungs are not fully expanded; second, prevention and treatment of the collapse of a lung after surgical operations, the condition from which postoperative pneumonia commonly develops; and, third, the possible contribution that inhalation of carbon dioxide with oxygen may make to the treatment of bronchial and lobar pneumonias.

Nutritive Aspects of Human Milk.—Under controlled methods of expression, sampling and analysis of milk, Macy has demonstrated that there are significant changes in the composition of milk from nursing to nursing and from day to day. Daily trends are apparent in the fat, total solids, total nitrogen, total ash, calcium, phosphorus and chloride components of milk irrespective of diet, rest, activity, and stage of lactation. Such observations suggest that there is some peculiarity of mammary gland physiology that produces these rhythmic fluctuations of individual milk constituents. It has been demonstrated that although some of the milk constituents vary in a characteristic rhythmic manner they fluctuate about a level that is characteristic for a particular individual. This individuality not only is maintained during one lactation but may persist through succeeding periods of milk production. The quantity and quality of milk produced depend in the human mother in no small measure on her physiologic capacity and well being. At times, mother's milk may fail to meet all the needs of the baby. Although incomplete knowledge exists concerning the physiologic changes experienced by women during lactation, there are variations in the quantity and quality of milk that are significant in the nutritional welfare of the infant.

Chemotherapy of Tuberculosis.—Wells states that, although the last decade has seen an almost complete abandonment of systematic experimental research on the specific chemotherapy of tuberculosis, this fact by no means proves that there remains no possible future for this principle. But it certainly seems reasonable to believe that tuberculosis offers less prospect of early success than almost any other bacterial infection, in consideration of the resistance of the tubercle bacilli and the highly protective wall of active and labile macrophages separating them from the chemotherapeutic agent. One can hardly expect a triumph here before the chemotherapeutic conquest of less resistant organisms in a less protected environment, as with typhoid, erysipelas and bacterial endocarditis, to name a few typical examples. Probably some new success with some other bacterial infection will be needed to stimulate a new attack on the more difficult problem offered by tuberculosis.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British J. of Dermatology and Syphilis, London

64: 117-172 (March) 1932

*Further Observations on Etiology of Papular Urticaria (Lichen Urticatus). R. Hallam.—p. 117.
*Some Observations on Autohemotherapy. N. Burgess.—p. 124.
Survey of Modern Development of Leprosy Work (1917-1931), with Appreciation of Present Position. R. G. Cochrane.—p. 132.

Etiology of Papular Urticaria (Lichen Urticatus).—Hallam believes that papular urticaria is an allergic manifestation. Since the complaint may be controlled by detaining the child in the hospital for the night only, the exciting cause is probably associated with the home sleeping arrangements. A food factor is not the exciting cause.

Autohemotherapy.—According to Burgess, the action of whole-blood injections does not depend on the production of a leukocytosis. The hemoclasic crisis is not a satisfactory test for allergy. In the cases examined, no relation between whole-blood injections and the hemoclasic reaction was discovered. Whole-blood injections had no effect on the sedimentation rate of the red corpuscles as estimated by the method of Zeckwer and Goodell. Proteose was obtained from the urine of normal persons and those with various dermatoses. No constant effect on the production of proteose by single whole-blood injection could be demonstrated.

British Journal of Ophthalmology, London

16: 129-192 (March) 1932

Short History of Ophthalmia During Egyptian Campaigns of 1798-1807. M. Meyerhof.—p. 129.
Treatment of Limbal Tumors with Radium. T. H. Butler.—p. 152.
*Intracapsular Extraction of Cataract: Analysis of Sixty-Seven Cases as Plea for Its Wider Adoption. R. C. J. Meyer.—p. 156.
Iris Anesthesia by Retrobulbar Injection and Paralysis of Orbicularis Oculi by Seventh Nerve Block. L. B. Somerville-Large.—p. 166.

Intracapsular Extraction of Cataract.—On the basis of his experiences in sixty-seven cases, Meyer enumerates the advantages of the intracapsular extraction of cataract thus: (1) applicability to immature cataract, which is technically easier than swollen mature cataract; (2) absolute lack of irritation of the eye during convalescence (this must be due to there being absolutely no capsule or cortex to irritate the eye, which remains quiet and white, showing no ciliary irritation whatever), and (3) early rupture of the lens capsule merely reducing the operation to the old and well known extracapsular extraction. The capsule ruptures either early or on delivery; in either case it does not matter. The author has never had one rupture half way, this is the operator's main fear; apparently it is groundless. The disadvantages of the operation are as follows: 1. Technically it is not so easy as the extraction out of the capsule. It is not a beginner's operation, but well within the reach of any surgeon of average capability. 2. The duration of operation is longer, owing to the injecting of procaine hydrochloride and the sewing of the conjunctiva, though the sedative and the procaine apparently keep the patient quiet, and the eye almost immobile. 3. There is no capsule to hold back the vitreous.

British Medical Journal, London

1: 411-456 (March 5) 1932

Two Specimens of Early Human Ova. W. Shaw.—p. 411.
*Malignant Disease of Lungs: Radiographic Features. P. Kerley.—p. 416.
*Injury of Rectum Caused by Faulty Administration of an Enema. H. H. Rayner.—p. 419.
Pharmacologic Properties of Iso-Amylethyl Barbituric Acid (Amytal). R. C. Garry.—p. 421.
Some Interesting Drug Eruptions. H. Haldin-Davis.—p. 422.

Malignant Disease of Lungs.—Kerley states that there are two equally common roentgen manifestations of primary lung cancer. In one a lung or a lobe is involved in a pneumonic process, and in the other the disease appears to be limited to the hilus. Certain roentgen features are common to the two forms, but as a rule they maintain distinctive appearances to the end. The appearances of the lobar or pneumonic form vary with the number of lobes affected. Contraction of the lobe, as evidenced by displacement of the fissure, was first noted by roentgenologists and led to a revision of the preroentgenologic idea that neoplasms of the lung increased the thoracic contents. Primary lung cancer by obliteration of bronchi and destruction of lung tissue always diminishes the thoracic contents. On closer study of a roentgenogram of a lobar carcinoma, it will be observed that the opacity is densest near the root and diminishes in intensity toward the periphery. If a very hard picture is taken, one can often distinguish two opacities: the first an extremely dense one attached to and spreading from the hilus, the second a less dense one covering the affected lobe in all directions. These two shadows represent growth near the hilus and collapse in the periphery of the lobe. If the vascular markings of the lung are invisible in the light peripheral opacity and visible in the dense opacity near the root, one can diagnose carcinoma with certainty, for their is no other lobar pneumonic process that produces this dual effect. In all nonmalignant pneumonic processes the lung markings are either completely invisible or faintly visible in every part of the affected area. Diaphragmatic paralysis is an invaluable sign. A less well known disturbance of innervation associated with carcinoma of the lung is compression or invasion of the vagus. Pleural effusion, as a complication of the pneumonic or lobar form of carcinoma, is the bugbear of the radiologist, for it masks nearly everything. If the effusion is small it has no significance, but if, as so often happens in malignant conditions, the effusion is large, one is confronted with great difficulties. The visualization of enlarged bronchial or mediastinal lymph nodes is one of the most valuable diagnostic points and is, moreover, of considerable clinical significance, since it contraindicates surgical intervention. An equally frequent roentgen manifestation of bronchial carcinoma is the so-called hilar form, which is seen as a dense opacity round the root of the lung without collapse or consolidation in the peripheral parts of the affected lobe or lobes. This type of the disease is easier to diagnose than the pneumonic type, because there are few other lung diseases causing similar appearances. A sudden transition from the hilar type to the pneumonic type is not uncommon, and probably if one saw the disease early enough one would find it first as a small hilar opacity later causing lobar or lung collapse. Obstruction of the superior vena cava takes place earlier and more often with a growth of the hilar type than with one of the pneumonic type. It is obviously impossible to describe all the varying appearances that are to be seen in roentgenograms of pulmonary carcinoma. But there is one roentgen feature common to all malignant growths of the lung: there is never normal lung tissue between the shadow of the neoplasm and the shadow of the mediastinum.

Rectal Injury Caused by Faulty Enema.—Rayner reports a case of injury of the rectum caused by the faulty administration of an enema. He suspects that the injury is by no means so rare as it is believed to be, and that the distress of inflicting it may befall any nurse. Because the mishap may have the most disastrous consequences and because it is entirely avoidable, attention should be called to it with some emphasis, even if it is a very uncommon occurrence. The injury is always a grave one, for it causes sloughing of the mucous membrane of the anal canal and rectum, and it is commonly necessary to perform a temporary colostomy in order to promote healing of the extensive raw surface left after separation of the sloughs. Sometimes, in consequence of the dense cicatricial stricture that follows healing, the colostomy may have to be a permanent one. In some cases death has resulted from sloughing of the rectal wall into the peritoneal cavity, or from spread of sepsis along the fascial planes of the pelvis. In addition to the gravity of the injury there is another important consideration—the legal aspect. The essential factor in the production of the injury is the use of a hard conical nozzle, usually of bone, sometimes of glass. The injury is caused by forcing the tip of the nozzle through the mucosa of the anal canal. Penetration of the mucous membrane by the nozzle tip may occur in certain circumstances without gross or unpardonable carelessness on the part of the administrator. Such circumstances, for example, as a poor exposure of the perineum from bad lighting and faulty position of the patient, insufficient lubrication of the nozzle, the use of some force to overcome the resistance caused by inaccurate insertion of the nozzle, and an everted condition of the

anal mucous membrane, as in prolapsed hemorrhoids, may combine to trap the nurse, particularly if she is comparatively inexperienced and therefore handicapped by a feeling of awkwardness in the giving of an enema. The nurse, unaware of the perilous position of the nozzle—for the actual puncture of the anal mucosa gives the patient little pain—proceeds to inject a strong solution of soap and water into the submucous layers of the anal canal. The enema fluid strips up the mucosa of the anus and rectum over a large area, the extent of which depends on the amount of the fluid that has been injected. The injection of fluid under strong pressure into the submucosa causes such great pain to the patient that the nurse soon realizes that something is amiss and stops the enema, but not before some damage has been inflicted. The patient may experience a sensation of nausea and faintness, or he may even collapse, but in most cases these constitutional disturbances quickly pass off after the abandonment of the enema; so, too, the intense pain diminishes and becomes a mere discomfort or bearing-down sensation, of which the patient makes no complaint. At this stage, then, to the nurse there may be no visible evidence of the injury—no swelling and no bleeding from the anus—and she ascribes the patient's distress during the injection to some abnormal sensitiveness on his part, and so no report of the incident may reach the medical man.

Edinburgh Medical Journal

39: 121-228 (March) 1932

*Cause and Treatment of Displacements of Heart in Pulmonary Tuberculosis. C. Clayson.—p. 121.
Tuberculosis Schemes: Administrator and Clinician. A. S. M. MacGregor.—p. 126.
Some Observations on Death Rate from Tuberculosis in Glasgow. J. A. Wilson.—p. 131.
*Underlying Principles in Treatment of Bone and Joint Tuberculosis. A. Dale.—p. 142.
*Some Observations on Tuberculids. R. C. Low.—p. 154.
Pregnancy in Tuberculosis. J. H. Ferguson.—p. 165.
Human Tuberculosis of Bovine Origin. A. S. Griffith.—p. 177.
Incidence of Human and Bovine Types of Tuberculous Infection in Children Living in West of Scotland. J. W. S. Blacklock.—p. 190.

Displacement of Heart in Pulmonary Tuberculosis.—From a review of the literature, Clayson concludes that the main causes of cardiac displacements in pulmonary tuberculosis are fibrosis and pleuropericardial adhesions, associated or not with a previous pleural effusion. Persistent afebrile tachycardia is not necessarily an indication of active disease and may be due to a displaced heart. When the roentgenogram shows a displaced heart, treatment should not be postponed till symptoms occur. A trial should first be given to breathing exercises, and then, if embarrassing symptoms develop, to phrenic evulsion. Displacements of the heart may possibly be prevented by the systematic practice of breathing exercises, begun as early as is judged to be safe.

Treatment of Bone and Joint Tuberculosis.—According to Dale, the modern conception of the pathologic changes in bone and joint tuberculosis divides the treatment of the disease into two equally important parts. The lesion in the bone or joint is regarded as being secondary (with the exception of a few cases of direct infection) to a lesion elsewhere, usually in the lymph nodes, often hidden from view, as in the bracheobronchial or retroperitoneal groups. The spread to the bone or joint takes place by the blood stream, the tubercle bacilli reaching the circulation by way of the lymphatics. The patient must be viewed in a dual light. He is suffering from a general tuberculous infection and a localized tuberculous lesion. The latter is a local manifestation of the former. Treatment that aims at correcting the local condition, while disregarding the general infection, is necessarily unsound. The two must be treated simultaneously and with equal persistence. Even the complete eradication of the local focus, by excision or amputation, does not cure the patient. If treatment of this general condition is not continued, the persistence of the general infection may manifest itself in a further local outbreak.

Tuberculids.—Low states that in investigations on tuberculids some observers have noted positive observations of tubercle bacilli, either microscopically or by animal inoculation. Others have obtained negative results; but from analogy, especially in the work done with ringworm fungus in producing microsporids and trichophytids and with favus fungus in producing favids, one is safe to assume that the tubercle bacillus is actually present in all tuberculids and can be found if the lesion is examined early enough. The reaction produced between the bacillus and the allergic skin is so great that within a short time the bacillus is destroyed. Probably in all cases of tuberculid, provided the lesion was removed within two or three days, the tubercle bacillus could be shown to be present. In cases in which negative results were obtained, the lesion was examined too late. Another well known fact also supports this view. After an attack of measles, the Pirquet skin test, although previously positive, becomes negative for some weeks or months. If, during that negative period, the child gets a blood infection with the tubercle bacillus, instead of the bacilli, which lodge in the skin, producing a tuberculid which would destroy them, they cause no reaction and are the starting point of multiple patches of lupus vulgaris. The author believes, therefore, that one may take it as proved that the tuberculid is a reaction between the tubercle bacillus itself and the allergic skin.

Lancet, London

1: 495-548 (March 5) 1932

Pathology and Treatment of Anemia. L. J. Witts.—p. 495.
*Electrocardiographic Changes During Treatment of Severe Diabetes. K. Shirley Smith and R. A. Hickling.—p. 501.
*Staphylococcal Toxin. P. N. Panton and F. C. O. Valentine.—p. 506.
*Hemorrhagic Purpura Following Scarlet Fever: Report of Two Cases in One Family. A. G. Gibson and F. G. Hobson.—p. 509.

Electrocardiographic Changes in Severe Diabetes.—Smith and Hickling took successive electrocardiograms during treatment in twenty diabetic persons of all ages. These were at first at intervals of a few days, and later of weeks and months. The tabulated results showed that the most pronounced changes occurred in patients below the age of 40, the T waves being commonly flattened in leads I and II and often diphasic in lead III. Increasing amplitude of the T waves in leads I and II, and the substitution of an upright for a diphasic T wave in lead III, were the effects most frequently observed during treatment. In two patients, inversion of the T wave in all leads was recorded at the outset. All these changes disappeared progressively during treatment, whether by diet alone or by diet and insulin. The most uniform change and restoration was observed in lead II, while the T wave in lead III was more easily influenced by treatment and less stable in its form and direction. Other occasional electrocardiographic changes occurring during treatment were progressive diminution of the P wave and progressive lessening of slurring in the Q-R-S complexes. The causal factors underlying the changes described were considered under the following structural and metabolic heads: (1) coronary sclerosis, (2) coronary intimal fatty deposition, (3) abnormal metabolic products, and (4) defective nutrition of the myocardium. On the basis of their observations, the authors conclude that the electrocardiographic changes produced by diabetes represent mainly a parenchymatous damage to the heart resulting from defective nutrition. Coronary disease, whether sclerotic and permanent or of an early reversible fatty type, probably occupies a subsidiary position in the production of abnormal electrocardiograms.

Staphylococcal Toxin.—Panton and Valentine prepared toxic filtrates from twenty-two strains of Staphylococcus aureus. Their capacity to hemolyze rabbit red cells, necrose rabbit's skin and destroy the leukocytes in human blood was estimated. The results confirm the observations of others that the hemolysin and necrotoxin vary closely together with no relation to the leukocidin. The lethal action for rabbits, when investigated, was found to vary with the hemolysin content of the filtrate. Comparison with the human lesions indicates that strains yielding strong leukocidin and weak hemolysin are commonly associated with acute severe infections and the reverse combination with long-standing superficial infection of the sycotic type. The association of certain combinations of toxins with certain types of staphylococcal infection suggests differences in the specific treatment of these conditions. The employment of an antiserum is chiefly efficacious against pyemic infection, and the important antibody in the serum is probably the antileukocidin. Two sycosis cases were, on the contrary, both associated with a strong hemolysin and weak leukocidin. These cases notoriously respond badly to vaccine treatment and are sometimes made worse by it. There is also some suggestion that they do worse

with an autogenous than with a stock vaccine. Treatment with toxoid in these and possibly in other staphylococcal lesions is more rational than treatment by vaccine, and in the sycosis the toxoid should contain leukocidin and possibly the minimum amount of hemolysin. The authors have treated only two such cases, but both were carefully selected as examples of extreme chronicity, widespread lesions, and resistance to every form of treatment. The result in both cases was sufficiently encouraging to test the method further. Immunization by toxin or toxoid is, in theory, preferable to vaccine therapy. The vaccine dose comprises a roughly calculated number of dead bacteria, and a very uncertain amount of toxins, mixed in quite unknown proportions. The dose of toxoid can be accurately measured, and by a choice of toxin the relative proportions of the different constituents can be chosen at will. The comparative values of toxin and vaccine treatment can be determined only by thorough clinical trial.

Hemorrhagic Purpura Following Scarlet Fever.—Gibson and Hobson enumerate thus the unusual features of two cases of hemorrhagic purpura following scarlet fever which they observed: 1. Purpura hemorrhagica as a late sequela of scarlet fever appears to be extremely rare. 2. This complication developed in two children of the same family, sixteen and twenty-one days, respectively, after an attack of scarlet fever which clinically was of a mild type and unaccompanied by any evidence of unusual toxemia. 3. While the mode of death was characteristic of death from hemorrhage, the actual loss of blood evident in the one case subjected to postmortem examination was small in comparison with the clinical anemia. 4. In contrast with the case reported by Box and Massingham, there was no reduction in the platelets. 5. It would seem possible to conclude only that in these children there existed some unusual constitutional susceptibility to the scarlatinal toxin.

Archives des Maladies du Coeur, Paris

25: 73-136 (Feb.) 1932

Physiopathology and Semeiology of Tonicity of Heart: Myocardial Dystonias. N. Pende.—p. 73.
*Transitory Agranulocytosis with Pultaceous Erythematous Angina. M. Roch, Mlle. E. Perrot and A. Sierro.—p. 94.
*Ventricular Fibrillation as Unrecognized Cause of Death in Diphtheria. J. Chalier and R. Froment.—p. 102.
*Clinical Diagnosis of Acute Leukemia. M. Szour.—p. 110.

Transitory Agranulocytosis with Pultaceous Erythematous Angina.—Roch and his co-workers describe a case in which agranulocytosis had permitted a rapid development of pulmonary gangrene which resulted in death despite a change in the blood picture to polymorphonuclear leukocytosis. Their observation leads them to believe that the blood disturbance is primary and that the infected foci, in which the ulceronecrotic angina is most frequent, are secondary. In comparing the results of their study with the agranulocytosis as defined by W. Schultz in 1922, they state that their case has the following differences: Their patient is a man, whereas Schultz reports the disease as predominant in women. The angina does not have the habitual ulceronecrotic character but rather an erythematous and pultaceous character. In spite of the seriousness and the intensity of the agranulocytosis, the patient began to improve; death was due to pulmonary gangrene, and then a polymorphonuclear leukocytosis had succeeded the agranulocytosis. The agranulocytosis is transitory and not as pronounced as in the instances reported by Schultz. A marked presence of myelocytes in the blood leads one to suspect a relationship between leukemia and agranulocytosis. In conclusion, the authors recommend a classification for agranulocytosis which would include (1) the agranulocytosis of W. Schultz and (2) symptomatic agranulocytosis due to (*a*) septicemia, (*b*) intoxication, (*c*) roentgen radiation, (*d*) medullary disturbance: pernicious anemia, thrombocytopenia, acute, myeloblastic leukemia and, perhaps, myeloid leukemia.

Ventricular Fibrillation as Unrecognized Cause of Death in Diphtheria.—Chalier and Froment state that, during the course of diphtheria, at least two kinds of grave and sometimes fatal arrhythmias occur; the one is a blockade as a result of an auriculoventricular dissociation, and the other is the grave extrasystoles, which announce a ventricular fibrillation. The cardiac mortality in diphtheria is not over 10 per cent. Death caused by ventricular fibrillation during diphtheria can be not only sudden but even unexpected (a diphtheritic heart can pass in five hours from normal to ventricular fibrillation). The author finally says that ventricular fibrillation as an ultimate manifestation of such infectious diseases as pneumonia, poliomyelitis and bronchopneumonia is of minimum interest, since it is a detail of an agonal physiopathology rather than a clinical phenomenon. In diphtheria it is otherwise, since the ventricular fibrillation is manifested in the hours or the days preceding death and the prefibrillatory tachyarrhythmia may be one of the first and only signs for the prognosis of a fatal issue.

Clinical Diagnosis of Acute Leukemia.—After a discussion of two case histories, Szour concludes that the absence of pathologic lymphocytes does not distinguish an acute aplastic anemia from an acute lymphatic leukemia. Modern authors consider an acute leukemia as a general atypical reaction of the hematopoietic apparatus with toxic and bacterial factors. In a clinical study the diagnosis should be exact and as limited as possible, and a prognosis as certain as possible. The fact that very marked anemia can occur in the course of chronic, acute or contagious diseases that usually do not cause a grave anemia ought to be remembered in differential diagnosis and prognosis, since the anemia is an expression of a disease of the hematopoietic system or, better, a functional insufficiency of that system. Certain cases of acute leukemia can occur not only without manifestations of the hemorrhagic diathesis, without ulcerations in the mouth and elsewhere, without visible hypertrophy of the lymph nodes and the spleen, or increase in the number of white cells in the peripheral blood, but also without qualitative changes of the white cells in the peripheral vessels. The acute leukemia can last several months; the acuity of that disease is then a relative thing. The violence and the acuity of the evolution of the acute leukemia in some instances ought to be related to the terminal periods of that disease. The final periods are sometimes preceded by prolonged phases of hidden (occult) acute leukemia in which the more characteristic qualities are general prostration, anemia, a subfebrile state or, more frequently, slight oscillations in temperature. These signs are not characteristic for a definite disease; they do not give a solid basis for a diagnosis. The addition to the symptoms of bleeding of the gums or other bloody effusions may also in certain cases possess a value in differential diagnosis.

Lyon Chirurgical

29: 1-136 (Jan.-Feb.) 1932

*Benign Tumors of Pelvis. Tavernier and Pouzet.—p. 9.
*Calcified Bursitis. E. Naz and S. Kadrnka.—p. 25.
Twenty Cecocolic Resections (Sixteen in Two Stages). R. Leriche.—p. 48.
Occlusive Sarcoma of Ileum: Resection with Ileostomy and Cure Lasting Twenty-Four Months. R. Leriche.—p. 50.
Resection in Two Stages of 1.9 Meters of Small Intestine for Multiple Tuberculous Stenosis. R. Leriche.—p. 53.
Ileocecocolic Resection in Two Stages for What Proved to Be a Posterior Appendicitis. R. Leriche.—p. 55.

Benign Tumors of Pelvis.—According to Tavernier and Pouzet, malignant tumors of the pelvis with the exception of sarcoma have, on the whole, a sharply defined character; roentgenograms of them are distinct and their evolution is rapid. The benign tumors of the pelvis are far different; they have generally a proteiform aspect in the roentgenograms, their evolution is slow, and they have a long latent period unless revealed by mechanical accidents. The authors report a fibroma, a myeloplaxoma, an unclassified tumor, an hydatid cyst, and two chondromas. In all the benign tumors, with the exception of the chondroma, the iliac bone is enlarged *en masse*, but one can distinguish two types, a spongy bone with a special trabeculation but without a destructive aspect (the fibroma, the undifferentiated tumor) and a spongy bone with cavities and zones of destruction (myeloplaxoma, and the hydatid cyst). The diagnosis of tumors of the pelvis may be very delicate but aside from secondary tumors and chondromas the tumors are easy to recognize when one has once seen the image. Outside of these cases and clinically it is a question of large spongy bone, which may be an osteosarcoma, a benign tumor, an inflammatory lesion and usually lesions in adolescents or young adults. The osteosarcoma evolves rapidly, generally with pain, and soon rarefies the ilium. The benign tumors, on the contrary, are insidious; there are no recognizable symptoms and the increase in volume is slow. The inflammatory lesions are usually cold or warm

abscesses. Roentgenograms give the chondroma a special character: the mass adjacent to the bone has a cauliflower aspect with disseminated ossifications in the tumor. The series of benign tumors enlarge the ilium in a regular manner with variable trabeculation. The persistence of the cortex, even though deformed, is an apparent sign of benignity. Finally there is the large ilium, more or less spongy, with areas of destroyed bone. In the latter condition the diagnosis between osteosarcoma, hydatid cyst, and a myeloplaxoma is difficult; an explorative osteotomy may sometimes lead to serious accidents (the patient with a myeloplaxoma had a hemorrhage after a biopsy, infected his wound and then his tumor, and died). The prognosis is unusual because extirpation of tumors of the pelvis is difficult. The development, although slow, causes progressive alterations in the solidity of the pelvis and finally serious sequelae. Chondromas of the pelvis are not always benign and after a slow growth may suddenly increase in volume; removal is followed by recurrence. Extirpation of tumors of the iliac wing *en masse* would be ideal but, unfortunately, when they have spread to the hip the intervention becomes quite extensive. In every case resection is less grave than curettage of the lesions (the latter caused death as a result of shock in their patient with an hydatid cyst) and the cavitary surfaces are easily infected (the patient with a fibroma died of infection). When a complete operation cannot be performed it is perhaps best to refrain from operating because the patient may lead an active life for a long time despite the lesion, and the operative mortality is high.

Calcified Bursitis.—Naz and Kadrnka state that inflammatory conditions of the bursae are common, but rarely is there an evolution toward calcification. The better known calcified bursae are found in the subacromial and subdeltoid regions and are designated as scapulohumeral periarthritis or disease of Duplay. They discuss a personal observation of bursolithiasis. Roentgen examination revealed a far advanced stage of calcification. The localization and the image of the calcified bursitis involved the whole question of the diagnosis of infections of the elbow which are accompanied by an ossifying or calcifying hyperplasia and especially the capsular chondromatosis, which has been described but without anatomic verification. The bursolithiasis was subtricipital, the size of a small egg, first noticed about six months previously following a traumatism, and presented few clinical signs. The bursitis seemed to have been brought on by the peculiar work which the young woman was doing (ringing the church bells of the village). The case history, the pathologic anatomy and histology, the etiology, symptomatology, roentgenology and a classification for a differential diagnosis are discussed in detail. The authors state that the prognosis in calcified bursitis is generally good; the only thing to fear is the infection of the bursa and its perforation into the neighboring articulation. In a calcified bursitis a traumatism may produce an acute or subacute inflammatory process that is always aseptic; in that case, surgical intervention is an absolute indication and it should be early if one wishes to avoid a particularly rapid muscular atrophy. To avoid a recurrence, the extirpation of the bursa ought to be total and include the capsule in its entirety. In chronic cases, when the condition of the patient permits, one can try a conservative treatment whose duration will always be long and the result of which remains uncertain. The patient may be treated by diathermy, massage, mobilization, roentgen therapy and crenotherapy. Although good results have been reported with roentgen therapy, the authors recommend total extirpation as the treatment of choice.

Paris Médical

1: 181-192 (Feb. 27) 1932

*Alimentary Anemias in Infancy. J. Cathala.—p. 181.
*Suppurating Gonococcic Thyroiditis Following Gonococcemia with Polyarticular Rheumatism and Gonococcic Nodular Erythema. C. Alexandresco-Dersca and D. Jonesco.—p. 188.
Aphorisms of Transthoracic Intrapulmonary Injection Called Lardage of Lung. G. Rosenthal.—p. 189.
Reduction of Shoulder Dislocation. A. Schwartz.—p. 191.

Alimentary Anemias in Infancy.—Cathala describes alimentary anemia as an evolutive type of curable anemia which at a certain age attacks some children submitted to certain diets. This anemia appears after the age of 6 or 8 months, is frequent at the end of the first and during the second year, and is not found any more after the third year. Although the time of its appearance coincides with the period of weaning there is no relation of effect and cause. It attacks especially certain children fed artificially and exclusively with excessive quantities (more than 1 liter) of cow's or goat's milk, and depends on some constitutional debilitating factor or a familial predisposition. Striking pallor of the skin and mucous membranes in an apathetic child, aged more than 6 months and less than 3 years, of regular weight and growth, but with flabby musculature and retardation of psychomotor development, will raise the suspicion of anemia, and a blood examination will establish the diagnosis. Splenomegaly may be present, auscultation may reveal fine crepitant and sibilant râles due to edema of the lungs, and there may be a slight rise in the temperature as a result of the nutritive disturbances. Often, but not always, alimentary anemia is associated with rickets; but there is no proportionate relation between the blood and the bone disturbances, and their respective treatments are totally different. Fever, rhinopharyngitis, bronchitis, pulmonary edema and even otitis accompany alimentary anemia, and dyspepsia or diarrhea is not uncommon. The hematologic formula is not specific but gives information on the degree and type of the anemia and on the reaction of the organism to the loss of red blood corpuscles. The author discusses the theories advanced by different authors to explain the occurrence of this anemia and outlines the treatment, which consists in an appropriate correction of the diet. The diet should be liberalized and completed with the juices of fresh fruits and vegetables, purées of green vegetables, meat juice, yolk of egg and stewed fruits, especially apples, the quantity of milk given being proportionately reduced. In complicated cases the necessary therapeutic measures must be instituted in order to obtain good results from the changed diet.

Suppurating Gonococcic Thyroiditis.—Alexandresco-Dersca and Jonesco report the case of a female patient suffering from gonorrhea with fever and very early gonorrheal localizations in the metacarpophalangeal articulation of the left and the right medius, the left radiocarpal and scapulohumeral articulations, the left elbow and the right knee. One week after the onset of the disease, localized pain on swallowing appeared in the right thyroid region with nocturnal copious perspirations, fever and chills. Painful polymorphous erythema nodosum lasting two weeks was a subsequent manifestation, while the right thyroid region was red, swollen and very painful on palpation: 12 cc. of pus was obtained from this region by exploratory puncture. Twenty-one autogenous vaccine injections, given subcutaneously one each day, combined with routine treatment have cured this patient.

Revue Méd.-Chir. des Maladies du Foie, Paris

7: 1-80 (Jan.-Feb.) 1932

*Tumors of Subhepatic Region: Eccentric Enlargement of Duodenal Outline. J. Didiée.—p. 5.
Reticulo-Endothelial System. C. P. Leblond and M. Ansel.—p. 16.
*Laboratory Research in Diseases of Liver. G. Parturier.—p. 24.
Study of Choluria Using Stalagmometry Combined with Hay's Test. L. Béthoux and P. Mounier.—p. 50.

Tumors of Subhepatic Region.—Didiée states that roentgen study of subhepatic problems assists sometimes materially in the localization and investigation of tumors; the modifications in the outline of the duodenum help to localize the abnormal mass found by palpation. The author describes a case in which roentgenographic in addition to clinical examination pointed to a large tumor lying entirely above the mesocolon and in addition retroduodenally to the inside of the duodenal circle, which it displaced eccentrically. Examination at necropsy showed a large, lobulated mass projecting into the duodenal outline, displacing the stomach upward and anteriorly and convex in front of the second and third portions of the duodenum; at this level the pancreas was visible, pressed against the anterior face of the tumor but remaining distinct from it. The mass extended to the posterior abdominal wall and enclosed the aorta, which traversed it from end to end. The rest of the abdominal cavity (especially the spleen) showed nothing abnormal. The cancerous mass was lardaceous and yellowish, with several areas of softening having the appearance of ecchymoses. The author concludes that the clinical history, the physical examination and the laboratory observations indicate a malignant tumor, deep

in the subhepatic region, above the mesocolon, involving the connective tissue but no vital organ; the roentgenograms confirmed the clinical indications and localized the neoplasm at the level of the head of the pancreas behind and within the duodenal outline.

Laboratory Research in Diseases of Liver.—Parturier discusses the technic of duodenal intubation and its clinical applications in icterus and a painful syndrome without icterus. He concludes that duodenal intubation cannot in itself suffice to solve hepatopancreaticoduodenal problems; but its usefulness in a great number of cases cannot be denied. Its domain will certainly become extended when more is learned about the functions of elimination of the liver. Duodenal intubation may pass through the diagnostic and enter the therapeutic realm. Gastric or duodenal ulcers may be placed at rest; some authors, however, fear a method that brings a foreign body in contact with the lesion. Nevertheless the fact that considerable relief is experienced following the introduction of a duodenal tube and feeding through it may be considered as an argument in favor of an ulcer. Other authors have proposed and successfully used the same method in cholecystitis.

Schweizerische medizinische Wochenschrift, Basel

62: 225-248 (March 5) 1932

The Individual as Object of Therapeutics. T. Oettli.—p. 225.
Electrocardiogram in Poisoning with Sodium Mono-Iodo-Acetate. W. Frey, W. Berger and H. Pfister.—p. 230.
*Pharmacotherapy of Arteriosclerosis. T. Gordonoff.—p. 232.
Sodium Bicarbonate and Citric Acid. F. Axmacher and H. Süllmann.—p. 236.

Pharmacotherapy of Arteriosclerosis.—Gordonoff ascribes the lack of an effective therapeutic method for arteriosclerosis to the fact that its etiology is as yet not fully understood, and that it is difficult to produce it in animals. But he further points out that Russian authors administered to rabbits cholesterol in sunflower oil and thus produced changes in various organs, but particularly in the aorta and in the larger arteries, which can be considered as an artificial sclerosis. The author employed this animal experiment to study the therapeutic value of various remedies that have been recommended for the treatment of arteriosclerosis, and he reports in detail his studies on the efficacy of chlorophyll. A series of control animals was given only cholesterol. A second group of animals was given chlorophyll and cholesterol. A third series was first treated for several weeks with chlorophyll, and then this was discontinued and cholesterol was given. To a fourth group he first administered cholesterol until hypercholesteremia had developed and then began to give chlorophyll. These experiments, the outcome of which is shown in charts and tables, revealed an antagonism between chlorophyll and cholesterol, in that the cholesterol content was reduced after chlorophyll administration. It is difficult to state to what this action of chlorophyll is due. The author is inclined to ascribe it largely to the reticulo-endothelial system, for not only does this system store cholesterol but recent researches indicate that it also takes an active part in the cholesterol metabolism. Chlorophyll is stored in the spleen, liver and lymph nodes, and it is possible that this pigment substance has a slight blocking effect and by thus inhibiting the function of the reticulo-endothelial system the resorption of cholesterol is partially or wholly prevented.

Annali Italiani di Chirurgia, Naples

11: 1-95 (Jan. 31) 1932

*Posttraumatic Jacksonian Epilepsy: Surgical Treatment. R. Alessandri.—p. 1.
Pseudocholecystic Syndrome in Women with Disturbances of Organs of Reproduction. D. Taddei.—p. 9.
Angioma of Striated Muscles: Pathogenesis. O. Bartoli.—p. 16.
*Intestinal Ureterostomy and Cutaneous Ureterostomy. M. Cilento.—p. 25.
*Bilateral Subdiaphragmatic Resection of Vagus Nerves. G. Pieri.—p. 53.
Removal of Needle from Right Ventricle of Heart. V. Simeoni.—p. 60.

Posttraumatic Jacksonian Epilepsy: Surgical Treatment.—Alessandri, on the basis of many cases that came to operation, outlines his ideas on surgical treatment in cases of posttraumatic jacksonian epilepsy, which consists essentially in seeking to restore the local anatomic conditions as far as possible to the normal state. With respect to the bone lesion, it is necessary to reconstruct the irregular margins occasioned by the loss of cranial substance, and especially to remove shreds of tissue buried in the cavity, and to repair the breach with a flap derived from the external cortex and left adherent to the pericranium. If there is a cicatrix or absence of the dura, the latter should be replaced by a free autotransplant of fascia. If there is a cicatrix buried in the cerebral cortical substance, it should be excised and a free autotransplant of muscular tissue employed to arrest the hemorrhage and fill out the cavity. It is advantageous also, if the cranial teguments are too thin or too much scarred, to cover the pericranial bone flap with normal skin, which may be taken with a torsion flap from the adjacent tissues. On the basis of his clinical experience and experimental researches, the use of small fragments of muscle for hemostatic purposes on bleeding points of the cerebral cortex is preferable with heterotransplants (rabbit or pigeon). Also extracts of muscular tissue have been tried and have been found capable of marked hemostatic action, and have the advantage of being always ready at hand and not leaving any foreign body in the brain. After removal of cerebral tumors or cicatrices or opening of cysts in the cortical substance, it will be necessary to employ some hemostatic action and at the same time to fill the cavity. On the basis of three operations performed and of experimental researches, the author thinks that the best results are secured with muscular autotransplants.

Intestinal Ureterostomy and Cutaneous Ureterostomy.—Cilento studied experimentally the results of intestinal ureterostomy with various operative methods, and by means of functional control with methiodal he ascertained the behavior of the function of renal elimination following the intervention. He studied also the results of cutaneous ureterostomy and concludes that the latter operation is preferable and that in any event bilateral intestinal ureterostomy must be performed in two stages, and after having controlled the function of the opposite kidney by means of descending pyelography, following always the extraperitoneal route and the technic of the submucous implant.

Bilateral Subdiaphragmatic Resection of Vagus Nerves.—Pieri performed in man, in fourteen cases, bilateral resection of the vagus nerves below the diaphragm, for gastric disorders. He describes the peculiar anatomic features and gives his personal technic. By means of supra-umbilical median laparotomy combined with resection of the xiphoid process of the sternum, the abdominal segment of the esophagus was exposed; the peritoneum that covered it was incised transversely, and the branches of the vagus nerves were isolated and divided, the left vagus anterior to the esophagus and the right vagus posterior to the esophagus and to the right. The operation was always well tolerated and did not cause appreciable untoward incidents. In performing the operation, the author did not apply anesthesia to the nerve trunks nor supplementary gastro-enterostomy.

Archivio Italiano di Chirurgia, Bologna

30: 581-686 (Dec.) 1931

*Diagnosis and Prognosis of Acute Abdominal Syndromes. C. Trinchera.—p. 581.
Action of Testicular Hormone on Process of Cicatrization. S. Gussio and S. Gibilisco.—p. 610.
Action of Nephrogenic Toxins. V. Ghiron and S. Scandurra.—p. 645.
*Preferred Method of Cholecystectomy. E. Leo.—p. 655.

Diagnosis and Prognosis of Acute Abdominal Syndromes.—Trinchera, taking as his point of departure the results secured in one of his previous researches, repeated the same researches (chlorides and urea in the urine and in the blood; indican, acetones and biliary pigments in the urine) in a systematic manner, extending them in the clinical field to patients with acute syndromes of the abdomen: occlusions, hernial strangulations, generalized peritonitis. To control the clinical observations, similar experimental researches were carried out, provoking in dogs acute diffuse peritonitis and acute occlusions. From the ensemble of these clinical and experimental researches, the author was able to make the following observations: a constant and marked increase of the xanthoproteic reaction, the rose bengal test and the test for indican and bile pigments and of urea in the blood and of indican in the urine in acute intestinal occlusions; negligible changes in the chronic occlusion syndromes. The maximal increase of these values was found in the acute types of occlusion complicated by active peritonitis

and in acute generalized peritonitis. In hernial strangulations the increase is moderate or slight in cases not followed by resection of the strangulated loop, while it is considerable in the cases in which such intervention is necessary. In dogs operated on for the purpose of producing simple occlusions, the author found at necropsy distention and moderate though very evident nutritional changes in the proximal stump.

Preferred Method of Cholecystectomy.—Leo criticizes the various methods of cholecystectomy, with and without drainage, subserous and otherwise. He attacks vigorously subserous cholecystectomy, giving his reasons for opposing it, and describes his own method of total cholecystectomy, without drainage, characterized by a new treatment of the gallbladder stump, which is covered with a pedunculated flap of the peritoneum of the gallbladder itself, or of the hepatic recess, to which peritonization, hemostasis and biliostasis by means of a special suture is applied.

Policlinico, Rome

39: 165-204 (Feb. 1) 1932. Practical Section

Conservative Surgery and Benefits Derived from a Urethral Retention Sound. G. Baggio.—p. 165.
Disorders of Neck of Bladder. E. Mingazzini.—p. 168.
Rare Traumatic Lesion of Female Urethra and of Erectile Organs of Vulva. G. Babini.—p. 178.
A Simple Procedure to Open Catheters Introduced into the Ureters, Without Modifying Concentration of Urine. D. Taddel.—p. 181.

39: 205-242 (Feb. 8) 1932. Practical Section

*Deformation of Pupil Following Bilateral Pressure on Eyeball as Sure Sign of Death. L. Tonelli.—p. 205.
Clinical and Experimental Study on Use of "Avertin" as an Anesthetic. G. La Cava.—p. 210.
Dermoid Cyst of Mesentery. E. Cortella.—p. 217.

Deformation of Pupil Following Pressure on Eyeball as Sign of Death.—Tonelli states that the sign of deformation of the pupil after death is distinct and easy to elicit. In a living person (also in a state of apparent death), energetic pressure applied with the finger to two or more sides of the eyeball does not produce any modification of the round contour of the pupil, whereas, in a dead person, bilateral or plurilateral pressure applied to the eye, even though slight, produces, promptly, easily observable deformation of the pupil, the pupil becoming oval, triangular or polygonal, depending on the directions in which the pressure is applied. The author, on the basis of 655 observations, emphasizes the practical value of the sign of pupillary deformation as a reliable proof of death.

Archivos de Medicina, Cirugía y Espec., Madrid

35: 161-180 (Feb. 27) 1932

Roentgen Examination of Gastric Mucosa. H. G. Mogena.—p. 161.
*New Method of Lumbar Anesthesia, the So-Called Peridural Anesthesia. J. M. Martinez Sagarra.—p. 165.

The So-Called Peridural Anesthesia.—Martínez Sagarra describes a new method of lumbar anesthesia, the so-called peridural anesthesia, according to Dogliotti's technic (injection of the anesthetic into the epidural space, without perforation of the dura mater). The patient is prepared in the same manner as if he were going to be given spinal anesthesia. The level at which the injection is to be made is determined according to the region in which the operation is going to be performed. A short needle, mounted on a mandrin, is introduced slowly until it passes beyond the resistance offered by the yellow ligaments of the vertebral laminae. The mandrin is then detached from the needle while the latter is left in place. If cerebrospinal fluid does not ooze through the needle, it is an indication that the needle's point is in the epidural space, where the injection should be made. Without moving the needle, one connects a syringe of 10 cc. capacity, filled with 10 cc. of physiologic solution of sodium chloride, and slowly injects its contents. The epidural space offers no resistance to the injection. In case of resistance, a slight withdrawal of the needle places it in the proper location. Then a syringe of 50 cc. capacity (of the Luer type), filled with 50 cc. of a 1 per cent solution of procaine hydrochloride is connected. As the important point before giving the injection is to be sure that the needle did not perforate the dura and that the injection is made in the epidural space, only 10 cc. of the anesthetic is given first. The absence of symptoms, which commonly appear in five minutes in spinal anesthesia, gives one the proof of the proper position of the needle in the peridural space, and the injection may be slowly continued until the patient receives from 25 to 50 cc. of the anesthetic. The needle and the syringe are then withdrawn together. Twenty minutes should elapse between the injection and the beginning of the operation to obtain a complete anesthesia. During this time the patient is instructed to keep in the proper position so as to obtain the larger displacement of the anesthetic toward the nerve roots that supply the given operative area. Peridural anesthesia is safer and gives better results than spinal and paravertebral anesthesia because of the absence of shock and of postanesthetic complications (intense headache, due to the loss of cerebrospinal fluid through the opening of the puncture, and sometimes relaxation of the sphincters or retention of the urine), the simplicity of the technic by performing only one puncture, and its longer duration (more than three hours). Extremely nervous patients may present during the operation either slight nervous disturbances or a diminished arterial pressure and peripheral vasoconstriction with marked paleness. The inhalation of a few drops of ether or chloroform by the patient permits one to finish the operation without any more nervous disturbances, while the injection of 1 cc. of caffeine improves the arterial or vascular pressure. The method gives satisfactory results in 85 per cent of the cases. Its principal indication is for lumbar and upper abdominal operations.

Deutsche medizinische Wochenschrift, Leipzig

58: 321-358 (Feb. 26) 1932. Partial Index

Teaching Staff, Student Body and State Supervision in German Universities. W. Hellpach.—p. 321.
*Practical Significance of Arterial Atony for Development of Arteriosclerosis. J. Plesch.—p. 325.
Clinical Significance of Seroreaction for Carcinoma According to Fuchs. von Falkenhausen.—p. 329.
Traumatic Diaphragmatic Hernia and Significance of Roentgenoscopy for Its Detection. S. Samuelson.—p. 332.
Bee Venom in Treatment of Rheumatic Diseases. W. Fehlow.—p. 334.
Decrease in Tuberculosis Mortality. L. Ascher.—p. 341.

Significance of Arterial Atony for Development of Arteriosclerosis.—Plesch maintains that arteriosclerosis is only a partial manifestation of a systemic disease; that it is not restricted to certain parts but involves at once the entire vascular system; that the disease may develop in persons of all ages, and that it may be arrested. He thinks that during the early stage it is curable, and that even during the later stages it can be favorably influenced. It is not necessarily a disease of senility, which is progressive and incurable. Following these introductory statements the author brings, in the main portion of his article, first pathologico-anatomic proofs for his thesis. In discussing the etiology he expresses the opinion that every influence capable of weakening the organism so that a general atony results is a cause of arterial atony and of sclerosis. As a statistical argument in favor of his theory that arteriosclerosis is not necessarily a disease of senility, he cites the fact that it was found in many of the young soldiers who died during the war. Of the clinical proofs for his theses, he first discusses the blood pressure. He points out that the minimal blood pressure is one of the most reliable indicators of the condition of the circulation. In arteriosclerosis the minimal pressure is usually increased, even when the maximal pressure does not yet show a noticeable increase. For this reason the author advises that the term hypertension should be applied to the minimal pressure rather than to the maximal pressure. In regard to the quantity of blood, he states that it is generally increased. After discussing the roentgenologic signs on the aorta, he calls attention to one of the most characteristic symptoms, namely, the serpentine course of the temporal artery. Other symptoms that he discusses are angina pectoris, changes in the bulbus oculi and elevation of the diaphragm. As the first therapeutic measure the reduction of the blood pressure is recommended, which is more readily obtained if the patient lies down. It is also necessary to reduce the quantity of the circulating blood. In presclerotic plethora, venesection has proved valuable. But it is also possible to reduce the amount of blood by a diet with restricted amounts of nitrogen and of sodium chloride intake. In the majority of cases, cardiac stimulants can be dispensed with. Prolonged administration of small doses of potassium iodide is more harmful than good, but if arteriocapillary fibrosis has already set in, potassium iodide should be given in large

doses (up to 8 Gm. daily) for about ten days. This treatment may be repeated two or three times at intervals of ten days. To counteract meteorism, the author recommends medication with tincture of asafetida.

Klinische Wochenschrift, Berlin

11: 353-400 (Feb. 27) 1932

Microscopically Visible Endogenous Iron Metabolism. G. Wallbach.—p. 353.
Quantitative Modification of Circulation in Human Beings. K. Hartl.—p. 356.
*Aspects of Enterococcic Endocarditis. G. Rosenberg.—p. 359.
*Influence of Epinephrine on Diastolic Blood Pressure in Aortic Insufficiency and in Exophthalmic Goiter Similar to That in Beriberi. W. C. Aalsmeer.—p. 362.
Influence of Thyroxin on "Avertin" Concentration in Blood. W. Nell.—p. 367.
Pathogenesis of Urea Retention of Extrarenal Origin. A. Jezler.—p. 370.
Incomplete and Complete Genital Cycle of White Mice. C. Clauberg.—p. 373.
Severe Anemias Following Total Resection of Stomach. K. Gutzeit.—p. 376.
Significance of Posterior Lobe of Hypophysis for Lactation. E. Fauvet.—p. 377.
Posttonsillitic Sepsis. C. Hirsch.—p. 377.

Aspects of Enterococcic Endocarditis.—In the introduction, Rosenberg calls attention to studies by other investigators, which revealed that the clinical aspects of endocarditis lenta may exist although Streptococcus viridans is not present. He then describes a case of his own observation with the aspects of endocarditis lenta. In the course of the disease, several blood cultures were made. The pathogenic organism showed variable qualities, for in the first culture it showed characteristics that indicated its position between type A and type B of enterococci. The later cultures always revealed the type B enterococcus. It is emphasized that the term endocarditis lenta should be reserved for those infections of the endocardium which are caused by Streptococcus viridans. This demand is based on the experience that other pathogenic organisms, particularly enterococci, do not cause a typical endocarditis lenta as Schottmüller describes it. Endocarditis caused by enterococci differs from endocarditis lenta, especially in its pathologico-anatomic aspects, in that in enterococcic endocarditis the infarcts are infected, puriform and softened.

Influence of Epinephrine on Diastolic Blood Pressure.—Aalsmeer relates that in studying the blood pressure of patients with beriberi it was found that the subcutaneous injection of 1 mg. of epinephrine produced a peculiar circulatory manifestation, in that the maximal blood pressure increased only occasionally, whereas the minimal blood pressure decreased always systematically. This decrease was the more marked, the further advanced the disease was. The author found that this manifestation not only gave information about the type of the circulatory disturbance but also was valuable in determining the efficacy of a therapeutic measure, for, as the patient's condition improves, this sign gradually disappears. Since certain aspects of the circulatory disturbance of beriberi, such as increase in pulsation and the decrease in the minimal pressure, are also present in aortic insufficiency and in exophthalmic goiter, it was decided to make the epinephrine test also on patients with these disorders. It was found that the epinephrine reaction in patients with aortic insufficiency or with exophthalmic goiter showed, according to the degree of the disturbance in the peripheral circulation, a surprising similarity with that in patients with beriberi. The author thinks that the epinephrine effect in combination with the minimal pressure gives a better indication of the degree of the circulatory insufficiency than the so-called pulse pressure.

Medizinische Klinik, Berlin

28: 293-316 (Feb. 26) 1932

*Biologic Curve of Leukocytes as Indicator of Course of Disease: Its Practical Significance. V. Schilling.—p. 283.
Crystallographic Analogies to Immunity, Infection and Stimulation Conduction. A. Tschermak-Seysenegg.—p. 287.
Fatal Pulmonary Embolism and Surgery of Goiter. V. Lieblein.—p. 292.
Problem of Dosage in Acetarsone Treatment of Congenital Syphilis. W. Stern.—p. 295.
Therapy of Encephalitic Sequelae. S. Muntner.—p. 295.
Conservative Treatment of Muscular Torticollis. M. Kollmann.—p. 296.
Influence of Administration of Phosphate and Creatine on Physical Capacity. R. Nothhaas.—p. 297.
Dry Convalescent Serum. A. Lichtenstein.—p. 299.

28: 317-350 (March 4) 1932

Protein Therapy. R. Schmidt.—p. 317.
*Biologic Curve of Leukocytes as Indicator of Course of Disease: Its Practical Significance. V. Schilling.—p. 319.
How to Protect Obstetricians Against Charge of Carelessness. W. Lüttge.—p. 323.
Atypical Ulcers of Bladder. K. Heusch.—p. 325.
Results of Medical Examination for Occupational Fitness of Drivers of Motor Vehicles. C. Heidepriem.—p. 329.
Is Sarcoma Curable? A. Hintze.—p. 331.
Disturbances During Dentition. F. Rothenberg.—p. 333.
Law of Irradiation of Autonomic Reflexes. B. Kisch.—p. 334.
Treatment of Endocrine Obesity by Means of Combination of Thyroid Substance with Potassium and Phosphoric Acid. Gertrud Koehler.—p. 335.

Biologic Curve of Leukocytes as Indicator of Course of Disease.—Schilling calls attention to the fact that, when the study of the leukocytic blood picture was first begun, it was assumed that certain pathogenic organisms produced typical changes, such as a monocytosis in malaria. But in due time it was recognized that the main characteristics of a blood picture were not determined by the type of the pathogenic organism but that the various phases of the biologic curve of the leukocytes corresponded to certain reactions of the patient's organism. It was found that during the progressive stage of the disease neutrophilia predominates, at the time of the crisis there is a monocytosis, and during the period of convalescence there is an increase in the lymphocytes and in the eosinophils. These three phases correspond to the reactions of the three defense systems of the organism; namely, the bone marrow, the reticular monocytic system and the lymphatic system. After thus explaining the foundations of the simple biologic curve, the author shows the course it takes in the event that the virulence or special development of the pathogenic organism leads it into different routes. As an example he takes the artificial malaria infection. He further discusses the significance of the leukocyte curve in gynecology. During a normal delivery the leukocyte curve usually presents the aspects of a mild infection or of a slight injury. Considerable changes are noticeable during septic puerperal processes. If an infection takes a malignant course, the blood picture shows a constantly increasing neutrophilia, and this tendency is not interrupted even during a surgical intervention. The author further shows the significance of the leukocyte curve during such conditions as sandfly fever, benign erysipelas, recurrent fever, measles, pneumonia, typhoid, tuberculosis and even psychic disorders. In the conclusion he refutes the statement that this form of examination of the blood is too specialistic. He emphasizes that it is a reliable method of observation at the bedside, and that it gives indications for therapeutic measures.

Monatsschrift für Kinderheilkunde, Berlin

52: 1-176 (Feb. 23) 1932

*Intracranial Hemorrhage During Birth: Clinical Diagnosis. W. Catel.—p. 1.
*Cause of Death in Premature Birth. H. G. Creutzfeldt and A. Peiper.—p. 24.
Central Hyperpyrexia During Childhood. M. Weichsel.—p. 37.
Nitrogen Metabolism in Convalescing Children During Sojourn on Sea Shore. H. Schadow and F. Roeloffs.—p. 50.
Occurrence of Colon Bacteria in Stomach and Feces of Premature Infants. Susanne Seyffarth.—p. 73.
Occurrence in Blood Serum of Egg and Milk Antibodies Effecting Complement Fixation. Alexandra Strobl and A. Wasitzky.—p. 95.
*Treatment of Whooping Cough by Means of Bordet Vaccine. M. Weichsel.—p. 106.
Chronic Pyuria in Infants and Small Children: Experiences in Examination and Treatment. W. Grävinghoff and H. Viethen.—p. 117.
Acidity of Cerebrospinal Fluid in Intoxication of Nurslings. Hilde Bruch, F. von Graevenitz and S. Rosenbaum.—p. 135.
Unemployment and Development of Children and of Young Persons. E. Schlesinger.—p. 146.
Idem. A. Keller.—p. 150.
Conservative Treatment of Empyema. K. Lewkowicz.—p. 151.

Intracranial Hemorrhage During Birth.—Catel shows that, with the aid of the simultaneous quantitative determination of bilirubin in the serum and in the cerebrospinal fluid, it is possible to diagnose intracranial injuries received during birth while the child is still alive. Although the number of cases in which this was possible is as yet not large, the method has the advantage that it is based on a reliable foundation. Observation proved that, even when the course of birth is normal, intracranial hemorrhages are comparatively frequent, but symptoms in the form of a lack of vitality are present only in about

one half of these cases. In spite of the fact that a first birth and a pathologic course of the birth (use of forceps or breech presentation) favor the development of birth injuries, the author considers it as not permissible to conclude from the birth anamnesis alone the presence or absence of a birth trauma. In a child that has been delivered by means of forceps or from a breech presentation and that later shows symptoms of Little's disease or of imbecility, it is not right to assume without reservation a causal relation between the two factors, as is often done by pediatricians and neurologists. The author admits that extensive intracranial injuries sustained during birth may be a direct cause of death or may lead to cerebral injuries that become manifest at a later date, but on the basis of his observations he considers it as out of the question that the birth trauma has significance as a cause of death or as a cause of late central nervous disorders which have been ascribed to it in recent years. Postmortem examinations revealed that, in 6.6 per cent of the children, death was a direct result of birth trauma, and after-examinations in children who were severely injured during birth showed that the further development was generally unimpaired.

Cause of Death in Premature Births.—Creutzfeldt and Peiper describe the results of the histologic examination of the brains of seven premature infants, who all had shown before death serious respiratory disturbances. Six of them revealed no hemorrhages whatever in the brain stem, and in the seventh child there were small extravasations without reactions of the surrounding tissues, that is, so-called agonal hemorrhages. In this case there also was a slight hemorrhage from the right vena terminalis. These observations contradict the assumption of Ylppö, of Schwartz and of others who believed that the fatal respiratory disturbances in premature infants must be the result of cerebral hemorrhages. On the contrary, the observations prove that death is only the result of the immaturity of the central nervous system and of the resulting weakness of the respiratory center.

Treatment of Whooping Cough by Means of Bordet Vaccine.—Induced by the hygiene commission of the League of Nations, Weichsel employed the Bordet vaccine in the treatment of fifty cases of whooping cough. All the children were in the early paroxysmal stage. There was no opportunity for a prophylactic use of the vaccine during the incubation period. Those children in whom the paroxysmal stage had begun more than two weeks previous were excluded from the vaccination. The Bordet vaccine consists of a culture suspension of killed Bordet-Gengou bacilli in ampules containing 1 cc. each. Six injections are supposed to be sufficient to check the whooping cough, and they were administered at intervals of forty-eight hours. Since no special directions were given as to how the vaccine was to be administered, the author made some of the injections subcutaneously and some intramuscularly. Local and general reactions were entirely absent in either form of administration. A therapeutic effect of the vaccine was not noticeable.

Wiener klinische Wochenschrift, Vienna

45: 257-288 (Feb. 26) 1932

*Pathogenesis of Diabetes Mellitus. L. Pollak.—p. 257.
First Development and Differences in Succession of Hereditary Organopathies in Human Beings and in Animals. V. Hammerschlag.—p. 263.
Modification of Elimination of Galactose by Paravertebral Injection. H. L. Popper and S. Hirschhorn.—p. 268.
Unusual Malformation of Kidney. F. Hawlisch.—p. 269.
Ketogenic Diet in Bronchial Asthma. M. Julesz.—p. 271.
Causes and Development of Urinary Incontinence in Women. H. Kamniker.—p. 272.
Indications for Therapeutic Use of Carbon Dioxide Respiration. K. Hitzenberger.—p. 276.
Simulation of Mental Diseases. K. Grosz.—p. 277.

Pathogenesis of Diabetes Mellitus.—Pollak discusses the question whether diabetes mellitus is always a pancreatic diabetes, more particularly an insular diabetes, or whether there are also cases of extra-insular origin. He calls attention to certain contradictions in galactose and dextrose assimilation, which he terms the galactose paradox of diabetes, and describes the tests he made to determine the mechanism of certain processes in the sugar metabolism. The last group of his experiments he sums up as follows: A galactose tolerance test produces in diabetic patients a considerable increase in the dextrose content of the blood. This indicates elimination of enormous quantities of sugar by the liver. Ergotamine tests revealed that in diabetic patients, just as in persons without diabetes, the glycosecretory impulse comes from two distinct endocrine glands. Both types of impulses are found in entirely different forms of diabetes. If these conditions are to be traced to a common cause, the author considers only one explanation possible. The glycosecretory impulses are the same in persons with or without diabetes. That in diabetic patients there is a much greater increase in the dextrose content of the blood must therefore be due to the fact that in diabetes there is no checking influence of insulin, which otherwise reduces the stimulation susceptibility of the liver.

Zeitschrift für Kinderheilkunde, Berlin

52: 299-430 (Feb. 9) 1932

*Chronic Hepatogenic Hypoglycemia During Childhood. S. van Creveld.—p. 299.
Sympathetic Nervous System in Tuberculous Meningitis During Childhood. P. S. Medowikov and D. O. Schenkmann.—p. 325.
Change of Potential Difference in Method of Evaluation of Dynamics of Organism During Childhood. P. Medowikov, H. Dernowa, E. Lebedewa and A. Marenina.—p. 331.
Clinical Studies on Supravital Granular Erythrocytes in Children's Diseases. M. Kasahara and K. Maeda.—p. 338.
*Action of Toxic Component of Viosterol (Calcinosis Factor) on Bone Phosphatase. G. Bischoff and A. Loeschke.—p. 349.
Influence of Large Doses of Creatine on Excretion of Phosphoric Acid in Urine. H. Fasold and A. Loeschke.—p. 358.
Hormone A of Anterior Lobe of Hypophysis as Active Substance on Generative Glands of the New-Born and of Children. H. O. Neumann and F. Péter.—p. 363.
Toxic Diphtheria: Virulence of Diphtheria Bacilli of Various Origin. Gertrud Heissen.—p. 372.
*Subepiphyseal Zones of Decreased Density in Roentgenogram of Nursling. P. György.—p. 389.
Subacute Bacterial Endocarditis During Childhood (Endocarditis Lenta). A. E. Fischer.—p. 405.
Toxic Diphtheria: Constitutional Influences on Character of Diphtheria Bacilli F. Gruneberg.—p. 423.

Chronic Hepatogenic Hypoglycemia During Childhood.—Van Creveld relates the clinical history of a boy, aged 10, in whom a chronic hypoglycemia had been observed for several years. This hypoglycemia is noticeable during fasting and it is combined with ketosis. The patient gives the impression of having adiposogenital dystrophy, and he also has an unusually large liver, the abnormal size having been noticed during the first year of life, when an exploratory laparotomy was done. The chronic hypoglycemia in this patient is different from the great majority of other cases that have been described, in that such symptoms as anxiety, hunger, rapid pulsation, trembling, spasms, dizziness, coma and reduction in blood pressure are entirely absent. The metabolism also shows typical differences from other cases of chronic hepatogenic hypoglycemia. Numerous experiments were made to gain a better insight into the metabolic disturbances of this patient. The existence of hyperinsulinism can be excluded almost with certainty. The ketosis was unfavorably influenced by epinephrine, even when the latter was given in minute quantities. As the origin of the complicated disturbance the author assumes the persistence of a fetal condition, and as proof for this assumption he cites the fact that in premature infants acetonuria and also hypoglycemia are much more frequent than in mature ones. This of course does not explain the disturbance in the reported case, but here the author sees the cause in a disturbance of the fermentative decomposition of the liver glycogen and perhaps also of the glycogen in other organs. The glycogen content of the blood was increased.

Action of Toxic Component of Viosterol (Calcinosis Factor) on Bone Phosphatase.—Bischoff and Loeschke found that greater doses of the calcinosis factor are tolerated by rachitic dogs than by normal dogs. The bone phosphatase is reduced by the calcinosis factor in normal as well as in rachitic animals. In rachitic dogs, the calcinosis factor increases the calcium and the phosphorus values of the serum. Simultaneously with this chemical regulation of the blood, calcium is deposited in the bones.

Subepiphyseal Zones of Decreased Density in Roentgenogram of Nursling.—György reports that in a nursling, aged 10 months, who was free from rickets, generalized edema developed in the course of an intensive antirachitic treatment, with signs of a renal disturbance of a mostly tubular character. Simultaneously in the long bones there became noticeable subepiphyseal areas of lessened density, such as are observed only in animals that have been treated with large doses of viosterol and have received a diet deficient in calcium. After the antirachitic treatment was discontinued, the osteoporotic zones of

decreased density extended in the direction of the diaphysis and were noticeable for several months. The author discusses what significance these observations have for the intermediate calcium metabolism.

Zeitschrift für Urologie, Leipzig

26: 81-152, 1931

Tuberculosis of Kidneys. A. Schmidt.—p. 81.
Injuries of Urinary Organs and Late Results of Same. E. Simon. —p. 98.
*Cytology of Pus in Gonorrhea in Men. L. R. Leites and D. G. Tulbermann.—p. 111.

Cytology of Pus in Gonorrhea in Men.—Leites and Tulbermann studied the ratio between the various types of pus cells during the different stages of gonorrhea and during the various complications. Their object was to detect in the gonogram a diagnostic aid similar to the spermoculture method or to gonococcus antigen determination. A difficulty in the study of the gonogram is that there is no normal pyogram as a basis of comparison, pus being always a pathologic condition. For this reason it was necessary first to determine certain threshold values. As such the authors considered for the eosinophils from 0.1 to 0.4 per cent; for the young forms from 0.1 to 0.6 per cent; for the staff nuclear cells (monocytes and lymphocytes) from 0.1 to 0.9 per cent. The method of examination was as usual. After the fresh smears had been dried in the air, they were fixed for fifteen minutes in alcohol and ether and then stained for twenty minutes in a Giemsa solution. The authors examined material from ninety-two patients and made in all 500 tests. In some of the patients the pus was examined only once or twice. In another group of thirty-two patients the pus was regularly examined from the beginning of the disease until there was no longer any discharge (from ten to twenty times in a period of several weeks). In cases of gonorrheal prostatitis the secretion of the prostate was likewise examined. Of the ninety-two patients, fifty-four had acute uncomplicated gonorrhea, nine acute epididymitis, twelve acute prostatitis, seven chronic gonorrheal urethritis, five chronic postgonorrheal urethritis, three chronic prostatitis and two nongonorrheal urethritis. In classifying their material according to weeks, the authors aimed to detect a characteristic gonogram during the same clinical stage, and they also tried to determine whether a change in the treatment had an influence on the cellular composition of the pus. The results of the investigations are shown in tables.

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Development of Perineum in Human Embryo. G. Politzer.—p. 579.
Accessory Mammary Glands. M. Hirasawa.—p. 585.
Tubal Pregnancy as Immediate Result of Surgical Intervention. W. Hannes.—p. 592.
Disturbance in Delivery as Result of Holoacardius Amorphus. F. C. van Tongeren.—p. 594.
*Prophylactic and Therapeutic Value of Ergot in Puerperium. J. Sühs. —p. 596.
General Cause of Lübeck Fatalities: Estimation of Genital Tuberculosis. A. Greil.—p. 601.
Warning Against Rectal Examination as Therapeutic Aid in Obstetrics. F. Eberhart.—p. 610.

Value of Ergot in Puerperium.—On two groups of fifty-three puerperas each, Sühs made tests to detect the therapeutic and prophylactic value of ergot. During the first three or four days of the puerperium the first group received eight drops of an ergot solution, three times daily, for prophylactic purposes. To the other group the ergot was administered only when disturbances developed in the involution. It was observed that, in the women who had received prophylactic ergot treatment, disturbances in the discharge of the lochia and in the involution of the uterus were less than half as frequent as in the women who had not been subjected to prophylactic ergot application. An entirely undisturbed course of the puerperium was observed in only 6 per cent of the women who had not received prophylactic treatment; but in those who had been subjected to the ergot prophylaxis, the course was normal in 57 per cent of the cases. The author thinks that this is a conclusive demonstration of the prophylactic value of ergot during the puerperium. When the ergot solution was administered only after the disturbances became manifest, it was noted that in one third of the cases the course was almost the same as would be expected without therapy, but in two thirds of the cases there was a favorable effect on the involution of the uterus and its attendant phenomena.

Polska Gazeta Lekarska, Lwów

11: 157-172 (Feb. 28) 1932

Etiology of Influenza (C'td.). M. Gieszczykiewicz.—p. 157.
*Rôle of Histamine in Arterial Hypertension. W. Koskowski.—p. 162.
Denicotinization of Tobacco Smoke. J. Nikołowowa and Z. Wójcik.—p. 164.

Histamine in Arterial Hypertension.—Koskowski states that histamine is antagonistic to epinephrine. Excess of histamine stimulates the suprarenals to increased secretion. Both substances exert their action on the blood vessels. The author's experiments show that ordinary intravenous injections of histamine cause a considerable and characteristic fall of blood pressure. Very slow injections, however, of greatly diluted histamine increase the blood pressure slowly but constantly. By previous experiments the author, jointly with Giedroyć, demonstrated that the red blood cells are the carriers of epinephrine and that they are capable of storing it up. The substance causing this excess of epinephrine in the blood is histamine. By causing hyperepinephrinemia, histamine is then indirectly responsible for certain cases of hypertension. Thus one of the therapeutic problems in these cases of high blood pressure is to select the diet so that the proteins digested produce a minimum amount of histidine, which is the source of histamine. It is known that animal myosin, globin, casein and so on contain histidine. In view of the foregoing problem, it would be logical to review next the plant proteins for the amount of histidine contained.

Acta Chirurgica Scandinavica, Stockholm

69: 305-400 (March 3) 1932

Osteochondritis Dissecans Capituli Radii. A. Nielsen.—p. 305.
Treatment of Severe Septic General Infections by Immunotransfusion. K. Hallberg.—p. 314.
Treatment of Complete Postoperative Biliary Fistulas. S. Hybbinette. —p. 327.
*Urea Tolerance Tests in Hypertrophy of Prostate. A. Hellstadius.—p. 339.
Contribution to Knowledge of Familial Hemolytic Icterus in Sweden, with Particular Reference to Results of Operation. T. M. Beckman and K. B. Jäderholm.—p. 353.
Operation in Case of Obliteratio Pericardii. A. Odelberg.—p. 378.
*Tuberculosis and Grawitz's Tumor of Same Kidney. E. Ljunggren. —p. 383.
Heminephrectomy in Case of Kidney with Two Ureters with Hydronephrosis and Stone in One Renal Pelvis. S. Friberg.—p. 393.

Urea Tolerance Tests in Hypertrophy of Prostate.—Hellstadius calls attention to the fact that urea tolerance tests have been used for testing the renal sufficiency in cases of hypertrophy of the prostate with the view of obtaining information regarding the renal capacity for excreting urea in cases in which the nonprotein nitrogen in the blood is not obviously increased. In comparing the outcome of the urea tolerance and the water tests, one generally obtains a certain agreement between the two; but in some cases there is noticed an obvious discrepancy between the two tests. It may be of advantage, therefore, at least in doubtful cases, to carry out a urea tolerance test besides the water test. There is no reason to conclude that the uric acid in the blood would increase earlier than the nonprotein nitrogen in an early stage of renal insufficiency, at least as far as it can be ascertained by the urea tolerance test.

Tuberculosis and Hypernephroma of Same Kidney.—Ljunggren describes a case in which a Grawitz's tumor (hypernephroma) and tuberculosis were present in the same kidney. He found seven similar cases in the literature. In his view it is most natural to assume in these cases that it was a coincidence that the two conditions occurred simultaneously, but he nevertheless thinks one has to take into account the possibility of a renal tumor predisposing to the development of a tuberculous process in the kidney. That the tuberculous infection would in any of the cases have been the primary factor, and secondarily given rise to tumor formation, he considers unlikely. One would rather contemplate the possibility of a tumor predisposing in some way or other to the development of a tuberculous process in the kidney; in a case that he observed recently, for example, one can envisage that the circulatory disturbances which experience shows exist in the renal parenchyma in the proximity of a tumor create a locus minoris resistentiae.